

CRPL-F217 PART A

OCT 1 -1962

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PART A
IONOSPHERIC DATA

ISSUED
SEPTEMBER 1962

U. S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS
CENTRAL RADIO PROPAGATION LABORATORY
BOULDER, COLORADO

IONOSPHERIC DATA

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IONOSPHERIC DATA

The CRPL-F series bulletins are issued as part of the responsibility of the Central Radio Propagation Laboratory for the exchange and dissemination of ionospheric and related geophysical data. While originally a by-product of the collection of data by the CRPL for use in radio propagation studies, the CRPL-F series bulletins, Part A, "Ionospheric Data," and Part B, "Solar-Geophysical Data," have provided useful service by collecting and making available a wide variety of data in convenient form for use in research, not only on radio propagation and the ionosphere, but also on a wide variety of geophysical problems. Beginning with CRPL-F 211, Part A, "Ionospheric Data," a number of changes have been made in the tables of ionospheric data which, by providing more information, should increase their usefulness.

The current form of the tables of ionospheric data provides the monthly medians and, in addition, the number of values entering into median determination (count) for all ionospheric characteristics listed. Also, the upper and lower quartile values, indicated by UQ and LQ in the tables, are listed for foF2, h'F2, h'F, and (M3000)F2. Quartile values are not listed for the other characteristics because of space limitations. The tables are prepared by IBM machine methods, which, by improving the speed and efficiency of preparation, permit earlier publication of the data.

Graphs of critical frequencies and (M3000)F2 will continue to appear. Graphs of percentage of time of occurrence for fEs and virtual heights of the regular ionospheric layers are no longer included. This change was necessary to provide space for the enlarged tables. Data on percentage of time of occurrence of fEs above 3, 5, and 7 Mc are still available from the CRPL and the IGY World Data Center A for Airglow and Ionosphere.

For many years, the tables of ionospheric data appearing in the F-series, Part A, listed values of medians recomputed at CRPL. While this practice enforced a certain uniformity, it was subject to some valid criticism for tampering with original data. The tables and graphs now show the ionospheric data just as they are provided by the originating laboratory. Responsibility for the accuracy and reliability of the data now rests entirely with the originator.

Gaps in the tables when data normally might be expected indicate the data were not provided by the originator. Following the recommendation of the World-Wide Soundings Committee, only values of median foEs are listed. In the few cases where fEs is still reported instead of foEs, the data will not be printed. Data will appear in the F-series, Part A, only when the complete daily-hourly tabulations have been received by the CRPL or the IGY World Data Center A for Airglow and Ionosphere.

Information on symbols, terminology, and conventions may be found in the "URSI Handbook of Ionogram Interpretation and Reduction, of the World-Wide Soundings Committee," edited by W. R. Piggott and K. Rawer (Elsevier, 1961), which supersedes previous documents. A list of symbols is available from CRPL on request.

The following table contains the latest available information on smoothed observed Zurich sunspot numbers, beginning with the minimum of April 1954. Final numbers are listed through June 1961, the succeeding values being based on provisional data.

Smoothed Observed Zurich Sunspot Number

Month	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1954				3	4	4	5	7	8	8	9	12
1955	14	16	19	23	29	35	40	46	55	64	73	81
1956	89	98	109	119	127	137	146	150	151	156	160	164
1957	170	172	174	181	186	188	191	194	197	200	201	200
1958	199	201	201	197	191	187	185	185	184	182	181	180
1959	179	177	174	169	165	161	156	151	146	141	137	132
1960	129	125	122	120	117	114	109	102	98	93	88	84
1961	80	75	69	64	60	56	53	52	52	51	50	48
1962	44	41										

Units of Ionospheric Data Tables

foF2, foEs - - - Tenths of a megacycle
 foF1, FoE - - - Hundredths of a megacycle
 h'F2, h'F, h'E - Kilometers
 (M3000)F2 - - - Hundredths

NOTE: Occasionally, when the median falls between two of the observed values, the median is carried an extra decimal place beyond these units. Those cases are easily identifiable by the extra digit appearing to the right of the number, in a column usually left blank.

MED - Median
 CNT - Count
 UQ - Upper Quartile
 LQ - Lower Quartile

WORLD - WIDE SOURCES OF IONOSPHERIC DATA

The ionospheric data given here in tables 1 to 100 and figures 1 to 100 were assembled by the Central Radio Propagation Laboratory for analysis and correlation, incidental to CRPL prediction of radio propagation conditions. The data are median values unless otherwise indicated. The following are the sources of the data in this issue:

Republica Argentina, Ministerio de Marina:

Decepcion I.

Trelew, Argentina

Tucuman, Argentina

Meteorological Service, Province of Macau, Asia:

Macau

Commonwealth of Australia, Department of the Interior:

Macquarie I.

Commonwealth of Australia, Ionospheric Prediction Service of the
Commonwealth Observatory:

Mawson

Townsville, Australia

Australian Department of National Development, Bureau of Mineral Resources,
Geology and Geophysics:

Mundaring, Western Australia

Universidad Mayor de San Andres:

La Paz, Bolivia

Electronics Directorate of the Brazilian Navy:

Natal, Brazil

British Department of Scientific and Industrial Research, Radio Research
Board:

Halley Bay

Defence Research Board, Canada:

Eureka, Canada

Ottawa, Canada

Resolute Bay, Canada

St. John's, Newfoundland

Universidad de Concepcion:

Concepcion, Chile

Instituto Geofisico de Los Andes Colombianos:

Bogota, Colombia

Czechoslovak Academy of Sciences:
Pruhonice, Czechoslovakia

Danish National Committee of URSI:
Godhavn, Greenland

The Finnish Academy of Sciences and Letters:
Sodankyla, Finland

Ionospheric Research Group (GRI), France:
Kerguelen I.
Terre Adelie

Heinrich Hertz Institute, German Academy of Sciences, Berlin:
Juliusruh/Rugen, Germany

Indian Council of Scientific and Industrial Research, Radio Research
Committee, New Delhi, India:
Ahmedabad (Physical Research Laboratory)
Bombay (All India Radio)
Calcutta (Institute of Radio Physics and Electronics)
Delhi (All India Radio)
Kodaikanal (India Meteorological Department)
Madras (All India Radio)
Tiruchy (All India Radio)
Trivandrum (All India Radio)

Geophysical and Geodetic Institute, Genoa, Italy:
Genoa (Monte Capellino), Italy

National Institute of Geophysics, City University, Rome, Italy:
Rome, Italy

Christchurch Geophysical Observatory, New Zealand Department of Scientific
and Industrial Research:
Campbell I.

Norwegian Defence Research Establishment, Kjeller per Lillestrom, Norway:
Tromso, Norway

South African Council for Scientific and Industrial Research:
Salisbury, Southern Rhodesia (University College of Rhodesia and Nyasaland)

United States Army Signal Corps:
Ft. Monmouth, New Jersey

National Bureau of Standards (Central Radio Propagation Laboratory):
Anchorage, Alaska
Boulder, Colorado
Huancayo, Peru (Instituto Geofisico de Huancayo)
Maui, Hawaii
Talara, Peru (Instituto Geofisico de Huancayo)
Washington, D. C.

SPECIAL NOTICE

Termination of Hourly Electron Density Profile Tabulations

Hourly $N(h)$ profiles for the Puerto Rico station have been published in the CRPL-F Reports, Part A, since May 1959, starting with the data for February 1959. This program terminated with the publication in CRPL-F215 of the data for March 1962. It is believed that this program has satisfied the objective of making available a large volume of profiles produced by methods of conventional accuracy. However, in anticipation of the increasing precision required by modern applications, we intend to concentrate further work on the calculation of more accurate profiles, inevitably in smaller volume.

NOVEMBER 1961 - JANUARY 1958

[illegible]

NOVEMBER, 1961

SWEEP 1.0 MC TO 25.0 MC IN 13.5 SECONDS.

[illegible]

OCTOBER, 1961

WEEP 1.0 MC TO 25.0 MC IN 13.5 SECONDS.

NOVEMBER 1961 - JANUARY 1958

ANCHORAGE, ALASKA (61.2N, 149.9W)

TABLE 2

[illegible]

OCTOBER, 1961

KEEP 1.0 MC TO 25.0 MC IN 13.5 SECONDS.

[illegible]

OCTOBER, 1961

DEED 1-0 31- TO 35-0 M. IN 12-5 SECONDS.

TABLE 9

TALARA. PERU 14.6S. 81.3W)

TIME 75.0W

hour	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
f6F2	MED	68	62	565	555	485	445	37	50	63	70	775	805	81	87	90	905	925	90	87	82	60	80	77	
	WGT	26	29	28	26	24	22	22	30	29	30	31	30	30	31	30	30	30	31	31	31	28	27	26	
	LO	10	11	10	9	8	7	6	5	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	
	UO	56	54	50	48	42	36	27	47	60	66	68	72	75	79	81	85	86	89	86	83	79	72	69	
	LO	10	11	10	9	8	7	6	5	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	
f6F2	MED	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	
	WGT	26	29	28	26	24	22	22	30	29	30	31	30	30	31	30	30	30	31	31	31	28	27	26	
	LO	10	11	10	9	8	7	6	5	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	
	UO	56	54	50	48	42	36	27	47	60	66	68	72	75	79	81	85	86	89	86	83	79	72	69	
	LO	10	11	10	9	8	7	6	5	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	
f6F	MED	235	250	255	265	250	240	250	255	2275	210	200	200	2025	200	200	205	205	220	260	290	310	305	275	240
	WGT	31	30	31	28	28	23	25	30	30	31	31	30	28	29	28	31	30	31	31	31	31	31	31	31
	LO	10	11	10	9	8	7	6	5	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0
	UO	230	235	240	245	235	220	240	245	215	200	195	195	200	190	195	190	200	210	255	280	285	290	255	230
	LO	10	11	10	9	8	7	6	5	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0
(M3000)F2	MED	315	310	300	315	320	320	3075	305	290	260	230	220	220	220	230	235	240	2425	2425	250	260	2725	300	315
	WGT	55	57	27	26	23	18	20	25	29	30	29	30	29	30	30	31	27	30	28	29	27	24	23	23
	LO	10	11	10	9	8	7	6	5	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0
	UO	295	300	285	300	300	300	300	290	285	260	235	220	210	210	210	225	230	225	230	240	245	265	280	300
	LO	10	11	10	9	8	7	6	5	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0
f6F1	MED	475	480	460	470	4	2	475	480	460	470	4	2	475	480	460	470	4	2	475	480	460	470	4	2
	WGT	31	30	31	28	28	23	25	30	30	31	31	30	28	29	28	31	30	31	31	31	31	31	31	31
	LO	10	11	10	9	8	7	6	5	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0
	UO	230	235	240	245	235	220	240	245	215	200	195	195	200	190	195	190	200	210	255	280	285	290	255	230
	LO	10	11	10	9	8	7	6	5	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0
f6E	MED	315	310	300	315	320	320	3075	305	290	260	230	220	220	220	230	235	240	2425	2425	250	260	2725	300	315
	WGT	55	57	27	26	23	18	20	25	29	30	29	30	29	30	30	31	27	30	28	29	27	24	23	23
	LO	10	11	10	9	8	7	6	5	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0
	UO	295	300	285	300	300	300	300	290	285	260	235	220	210	210	210	225	230	225	230	240	245	265	280	300
	LO	10	11	10	9	8	7	6	5	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0
f6E	MED	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
	WGT	26	29	28	26	24	22	22	30	29	30	31	30	30	31	30	30	30	31	31	31	28	27	26	
	LO	10	11	10	9	8	7	6	5	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0
	UO	56	54	50	48	42	36	27	47	60	66	68	72	75	79	81	85	86	89	86	83	79	72	69	
	LO	10	11	10	9	8	7	6	5	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0
f6EA	MED	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
	WGT	26	29	28	26	24	22	22	30	29	30	31	30	30	31	30	30	30	31	31	31	28	27	26	
	LO	10	11	10	9	8	7	6	5	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0
	UO	56	54	50	48	42	36	27	47	60	66	68	72	75	79	81	85	86	89	86	83	79	72	69	
	LO	10	11	10	9	8	7	6	5	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0

SWEEP 1.0 MC TO 25.0 MC IN 13.5 SECONDS.

JULY • 1961

TABLE 11

GOOMAYN, GREEN AND 169.3N, 53.5W)

TIME 45.0W

HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
f6F2	MEO	U	0.25	0	18	0.5	0.05	0.42	0.0	0.7	1.7	5.5	0.5	0.4	0.5	0.24	5.3	5.1	51.5	49	37	46	45	29
	CNT	U	26	30	24	20	20	20	21	17	14	15	23	32	26	28	20	29	30	20	40	30	29	29
	UO	U	35	37	35	35	36	40	45	50	49	50	50	50	50	50	47	42	48	46	43	43	40	40
	LO	U	35	37	35	35	36	40	45	50	49	50	50	50	50	50	47	42	48	46	43	43	40	40
f6F2	MEO	U	0.25	0	18	0.5	0.05	0.42	0.0	0.7	1.7	5.5	0.5	0.4	0.5	0.24	5.3	5.1	51.5	49	37	46	45	29
	CNT	U	26	30	24	20	20	20	21	17	14	15	23	32	26	28	20	29	30	20	40	30	29	29
	UO	U	35	37	35	35	36	40	45	50	49	50	50	50	50	50	47	42	48	46	43	43	40	40
	LO	U	35	37	35	35	36	40	45	50	49	50	50	50	50	50	47	42	48	46	43	43	40	40
f6F	MEO	U	0.25	0	18	0.5	0.05	0.42	0.0	0.7	1.7	5.5	0.5	0.4	0.5	0.24	5.3	5.1	51.5	49	37	46	45	29
	CNT	U	26	30	24	20	20	20	21	17	14	15	23	32	26	28	20	29	30	20	40	30	29	29
	UO	U	35	37	35	35	36	40	45	50	49	50	50	50	50	50	47	42	48	46	43	43	40	40
	LO	U	35	37	35	35	36	40	45	50	49	50	50	50	50	50	47	42	48	46	43	43	40	40
f6F1	MEO	U	0.25	0	18	0.5	0.05	0.42	0.0	0.7	1.7	5.5	0.5	0.4	0.5	0.24	5.3	5.1	51.5	49	37	46	45	29
	CNT	U	26	30	24	20	20	20	21	17	14	15	23	32	26	28	20	29	30	20	40	30	29	29
	UO	U	35	37	35	35	36	40	45	50	49	50	50	50	50	50	47	42	48	46	43	43	40	40
	LO	U	35	37	35	35	36	40	45	50	49	50	50	50	50	50	47	42	48	46	43	43	40	40
f6E	MEO	U	0.25	0	18	0.5	0.05	0.42	0.0	0.7	1.7	5.5	0.5	0.4	0.5	0.24	5.3	5.1	51.5	49	37	46	45	29
	CNT	U	26	30	24	20	20	20	21	17	14	15	23	32	26	28	20	29	30	20	40	30	29	29
	UO	U	35	37	35	35	36	40	45	50	49	50	50	50	50	50	47	42	48	46	43	43	40	40
	LO	U	35	37	35	35	36	40	45	50	49	50	50	50	50	50	47	42	48	46	43	43	40	40
f6E	MEO	U	0.25	0	18	0.5	0.05	0.42	0.0	0.7	1.7	5.5	0.5	0.4	0.5	0.24								

SWEEP 1.6 MC TO 20.0 MC IN 18 SECONDS.

MAY. 1961

TABLE 10

COPENHAGEN, GREENLAND (69.3N, 53.5W)

TIME 45.0W

[illegible]

SWEEP 1.6 MC TO 20.0 MC IN 18 SECONDS.

JUNE • 1961

TABLE 12

GODMAN, GREENLAND 169, 3N, 53.5W1

TIME 45.0W

[illegible]

SWEEP 1.6 MC TO 20.0 MC IN 18 SECONDS.

APRIL, 1961

TABLE 13

`HAWAII`, `HAWAII` (`U.S.N.`, `U.S.N.`)

TIME 15.00

+DPR		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
to F2	MED	59	32	45	48	70	36	33	40	66	76	84	78	107	121	133	139	134	136	135	130	112	93	81	69	62
	CNT	29	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	
	U	29	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	
	LO	48	45	45	36	71	26	35	62	72	78	32	104	118	127	128	130		130	138	117	94	75	64	57	48
N' F2	MED										290	310	330	340	315	297	290		270	257	250					
	CNT										1	30	34	357	365	330	320	459		280	260	259				
	U										1	30	34	357	365	330	320	459		280	260	259				
	LO										285	280	320	325	305	285	285		260	250	235					
N' F	MED	270	260	245	245	245	578	271	560	35	122	201	205	195	195	200	210	280		230	230	240	222	240	265	270
	CNT	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		30	30	30	30	30	30	30
	U	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		30	30	30	30	30	30	30
	LO	255	245	235	230	235	250	245	230	220	205	200	190	180	180	190	195	250		220	225	225	215	120	230	250
IM3000IF2	MED	282	310	320	305	490	285	307	337	320	287	278	275	290	300	310	307	315	320	310	340					
	CNT	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		30	30	30	30	30	30	30
	U	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		30	30	30	30	30	30	30
	LO	280	295	305	295	280	275	300	325	310	272	265	270	280	285	300	300	305	315	325	310	300	280	265	275	
to FI	MED										490	500	515	500	500	485										
	CNT										1	11	12	16	22	22	10									
	U										1	11	12	16	22	22	10									
	LO										370	372	360	350	320	275	210									
to E	MED						1	150	230	290	320	347	367	370	372	360	350	320	275	210						
	CNT						1	10	20	25	29	31	34	36	37	36	35	32	27	21						
	U						1	10	20	25	29	31	34	36	37	36	35	32	27	21						
	LO										11	12	14	16	17	18	19	20	21	22	23					
N' E	MED										145	151	109	107	107	107	107	107	107	169	111	13				
	CNT										1	13	22	29	30	29	28	27	26	25	19	13				
	U										1	13	22	29	30	29	28	27	26	25	19	13				
	LO																									
to EA	MED	22	18	18	15		13	155	245	335	36	39	395	395	41	42	39	375	34	28	28	29	205	18		
	CNT	30	30	29	29		29	29	29	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	
	U	30	30	29	29		29	29	29	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	
	LO																									

SWEEP 1.0 MC TO 25.0 MC IN 13.5 SECONDS.

APRIL, 1961

TABLE 15

MOI 283200 31111 36-45-72 00

TIME 76 00[illegible]

SWEEP 1.0 MC TO 25.0 MC IN 13.5 SECONDS.

APRIL, 1961

TABLE 16

HALL, HOWARD 120-BN. 156-SW.TIME 150-00W[illegible]

WEEP 1.0 MC TO 25.0 MC IN 13.5 SECONDS.

MARCH, 1961

TABLE 17

LA PAZ • BOLIVIA (16.55. 68.1W)

[illegible]

TABLE 19

MAUI, HAWAII (20.8N, 156.5W)

	hour	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
f6F2	MED	38	38	37	295	24	22	21	44	755	855	1125	115	1235	1295	1355	1345	135	108	87	605	0			
	LOW	44	43	59	36	25	25	26	24	75	90	116	132	136	144	168	138	130	120	101	86	52	5		
	U	34	33	29	23	20	19	20	42	65	82	97	108	115	118	124	124	108	98	74	52	40	41	40	35
	LO	265	245	230	230	2375	555	595	260	2335	2115	205	215	205	195	200	210	220	230	220	210	220	245	210	240
f6F	MED	27	28	28	25	26	24	24	28	28	28	27	25	27	25	27	27	27	27	28	28	27	26	26	25
	CNT	280	260	260	215	215	210	215	215	240	230	220	230	235	220	235	230	240	225	220	240	270	265	260	
	U	260	260	260	215	215	210	215	215	240	230	220	230	235	220	235	230	240	225	220	240	270	265	260	
	LO	265	245	230	230	2375	555	595	260	2335	2115	205	215	205	195	200	210	220	230	220	210	220	245	210	240
f6M30001F2	MED	3025	330	360	350	325	280	280	3125	335	315	3075	315	3075	300	305	315	375	330	365	335	325	295	310	
	CNT	24	26	27	25	27	26	28	28	28	28	28	28	28	28	28	27	28	28	28	27	24	25	310	
	LOW	320	350	365	370	360	320	290	330	340	330	320	315	310	315	320	320	340	350	340	335	310	320	320	
	LO	280	310	325	340	295	270	270	300	310	295	300	300	300	305	310	320	330	335	310	305	280	290	295	
f6F1	MED									1		470	5	8	7	5	2								
	CNT																								
f6E	MED								1	165	235	260	330	350	360	3375	320	3325	300	2575	190				
	CNT																								
f6E	MED																								
	CNT																								
f6E	MED								159	115	109	107	107	106	106	107	109	113	137	E					
f6EA	MED	17	28	28	28	28	28	28	28	28	28	27	25	27	25	27	27	27	27	28	28	27	26	26	25
	CNT																								

TABLE 2.9

A PAZ • BOLIVIA 116 • 55 • 68 • 1 W)

[illegible]

TABLE 18

CONCEPCION, CHILE 136.65, 73.0W)

hour		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
f6F2	MED	4.0	5.8	58.5	58.5	4.8	3.8	4.0	8.1	6.8	10.1	11.1	11.7	11.9	12.0	11.7	10.2	9.9	9.8	7.2	6.8	6.8	6.6	6.2	
	CNT	27	30	28	28	27	29	30	31	31	31	31	31	31	31	31	31	30	31	31	31	31	29	26	
	LO	6.5	6.6	6.4	6.5	4.3	4.1	4.6	6.4	7.5	11.3	12.0	13.0	13.6	13.0	13.1	12.1	10.7	10.0	8.4	7.4	7.0	7.2	6.8	
	LO	5.6	5.6	5.4	5.2	4.3	3.1	4.6	6.4	7.5	10.6	10.9	10.6	9.8	10.5	9.7	8.8	8.1	6.8	6.5	6.0	5.4	5.8	5.0	
f6F2	MED	3.0	3.1	3.1	3.1	3.1	3.1	3.1	3	2.5	2.75	2.80	2.80	2.80	2.75	2.60	2.50	2.37							
	CNT	27	27	27	27	27	27	27	3	27	26	26	26	26	26	26	26	26	1						
	LO	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5							
	LO	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5							
f6F	MED	31.0	30.0	28.0	24.0	23.0	26.0	24.0	23.0	22.5	22.0	20.75	21.0	21.0	22.25	23.0	23.5	24.0	23.0	24.0	28.0	29.0	30.5	30.5	
	CNT	30	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	
	LO	25.0	25.0	25.0	23.0	21.0	24.0	23.0	23.0	22.0	20.75	21.0	21.0	21.0	22.25	23.0	23.5	24.0	23.0	24.0	28.0	29.0	30.5	30.5	
	LO	25.0	25.0	25.0	23.0	21.0	24.0	23.0	23.0	22.0	21.0	20.0	20.0	19.5	20.0	21.0	23.0	23.0	24.0	23.0	23.0	25.0	27.5	28.0	
f6M3000F2	MED	27.5	28.0	26.0	33.0	32.0	29.0	32.0	34.0	33.0	32.0	31.0	31.5	31.0	31.5	32.0	33.0	33.5	33.0	31.0	28.0	27.5	28.0	27.5	
	CNT	27	30	28	28	27	28	30	31	31	31	31	31	31	31	31	31	31	30	31	27	29	26		
	LO	26.5	26.5	26.5	34.0	33.0	30.5	34.0	35.0	34.0	33.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	31.0	27.0	26	26	26		
	LO	26.5	27.0	26.5	35.0	30.5	27.0	31.0	33.0	32.0	30.5	31.0	31.0	30.5	31.0	32.0	32.0	32.0	32.0	27.0	27.0	27.0	27.0		
f6FI	MED																								
	CNT																								
f6E	MED						16.25	24.0	20	23	30	34.75	35.5	35.0	34.0	32.0	28.5	24.0							
	CNT						20	26	23	19	15	20	15	17	15	24	15	7							
f6E	MED						15.9	11.9	10.9	10.9	10.9	10.9	11.7	11.5	11.7	11.9	11.9								
	CNT						21	29	28	26	30	31	26	28	29	31	17	1							
f6E	MED						32	38	38	40	40	39	37	34	32	35	34								
	CNT						31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	
f6E	MED	21	20	20	15	17	17	22	26	32	38	38	40	40	39	37	34	32	35	34	35	26	28	20	
	CNT	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	

SWEEP 1.0 MC TO 25.0 MC IN 13.5 SECONDS.

MARCH, 1961

MARCH, 1961

SWEEP 1.0 MC TO 25.0 MC IN 13.5 SECONDS.

SWEEP 1.0 MC TO 25.0 MC IN 12.5 SECONDS.

JULY, 1961

[illegible][illegible]

		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
f0 F2	MED	395	42	345	27	23	20	43	78	32	1135	114	118	133	134	125	112	112	785	49	495	535	52	465	
	CNT	30	29	30	31	27	27	20	31	31	31	31	31	31	31	31	31	30	30	30	30	30	30	30	
	U	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	
	LO	37	37	37	29	29	29	34	59	9	145	182	157	176	182	173	182	182	86	72	53	52	38	33	
f1 F2	MED								U	45	2575	2674	240	290	295	2825	240	2525							
	CNT								5	10	2	14	23	28	27	20	2								
	U								200	200	200	200	200	200	200	200	200								
	LO								200	200	200	200	200	200	200	200	200								
f1 F	MED								U	20	2835	505	270	240	220	215	200	190	200	220	220	230	235	210	210
	CNT								29	30	30	28	30	31	31	31	30	27	30	28	30	30	29	28	
	U								200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	
	LO								200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	
(M3000)F2	MED	1975	320	335	330	300	2975	290	300	335	330	325	300	295	305	310	310	320	345	355	325	30	375	5	955
	CNT	28	28	30	25	26	29	31	30	320	340	335	320	315	310	311	311	311	30	28	28	28	28	28	
	U	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	
	LO	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	
f0 F1	MED								U	450	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
	CNT								1	6	9	6	5	1											
	U								1	6	9	6	5	1											
	LO								1	6	9	6	5	1											
f0 E	MED								1925	240	290	325	345	350	3575	345	335	300	245						
	CNT								18	30	28	25	24	26	22	23	21	19	16	1					
	U								18	30	28	25	24	26	22	23	21	19	16						
f1 E	MED								161	135	109	109	107	107	105	107	107	109	113						
	CNT								10	20	31	30	29	28	29	28	29	25	21	3					
	U								10	20	31	30	29	28	29	28	29	25	21						
f0 E1	MED	18	13	13	17	31	15	31	31	31	31	31	31	32	384	40	42	63	44	40	35	37	38	34	40
	CNT	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	
	U	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	
	LO	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	

[illegible]

TABLE 25

LA PAZ, BOLIVIA 116, 55, 68, 141

TABLE 29

NATAL, BRAZIL 15-15-35+2w1																		TIME 30-0W						
HOURL	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
16F2	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	MEQ	86	86	69	65	59	55	90	115	125	130	118	122	125	128	128	126	125	125	110	94	93	86	84
	CNT	137	143	150	100	87	74	75	95	105	117	122	129	138	142	145	152	151	150	150	150	149	150	152
	UQ	90	90	80	71	72	68	64	64	120	130	132	138	130	130	138	138	135	138	135	122	118	115	103
16F2	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	MEQ	245	235	245	250	255	250	245	260	440	230	220	210	205	200	210	205	230	250	280	330	370	385	335
	CNT	25	25	26	25	24	23	23	24	24	21	16	12	8	13	8	11	19	23	24	26	25	24	21
	UQ	90	90	80	71	72	68	64	64	120	130	132	138	130	130	138	138	135	138	135	122	118	115	103
16F2	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	MEQ	295	310	300	305	300	310	310	310	300	270	240	245	240	245	240	240	240	245	240	230	220	240	255
	CNT	12	16	21	20	21	21	20	23	25	21	19	18	18	20	17	20	17	21	19	16	8	7	10
	UQ	90	90	80	71	72	68	64	64	120	130	132	138	130	130	138	138	135	138	135	122	118	115	103
16F1	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	MEQ	230	305	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350
16E	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	MEQ	123	119	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113
16E	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	MEQ	35	39	42	40	48	58	59	58	56	58	56	56	56	56	56	56	56	56	56	56	56	56	56
16E4	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	MEQ	3	2	2	5	9	9	11	24	26	24	23	22	21	24	19	23	22	23	11	4	1	2	4

SWEEP 1.0 MC TO 25.0 MC IN 35 SECONDS.

APRIL, 1960

TABLE 31

TUCUMAN, ARGENTINA (26+05- 65+0w)																								TIME 80-0W			
HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
16F2	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U			
MEQ	117	113	150	100	87	74	75	95	105	117	122	129	139	142	145	152	151	150	150	150	149	150	152	150			
CNT	17	12	15	17	20	18	18	19	19	17	13	17	17	18	19	13	16	17	19	13	10	5	5	9			
UQ	90	90	80	71	72	68	64	64	120	130	132	138	130	130	138	138	135	138	135	122	118	115	103	95			
LQ	78	73	64	58	54	50	44	84	112	123	120	115	116	122	120	115	118	115	116	94	90	71	58	70			
16F2	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U			
MEQ	410	400	410	400	390	385	380	375	370	365	360	355	350	345	340	335	330	325	320	315	310	305	300	295			
CNT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
UQ	90	90	80	71	72	68	64	64	120	130	132	138	130	130	138	138	135	138	135	122	118	115	103	95			
LQ	78	73	64	58	54	50	44	84	112	123	120	115	116	122	120	115	118	115	116	94	90	71	58	70			
16F	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U			
MEQ	290	280	255	225	235	275	275	230	220	220	220	220	230	225	210	225	230	230	245	275	340	330	320	310			
CNT	24	25	22	22	22	22	22	22	21	20	14	12	12	8	5	11	13	17	21	22	21	21	20	21			
UQ	90	90	80	71	72	68	64	64	120	130	132	138	130	130	138	138	135	138	135	122	118	115	103	95			
LQ	78	73	64	58	54	50	44	84	112	123	120	115	116	122	120	115	118	115	116	94	90	71	58	70			
163000F2	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U			
MEQ	285	295	320	340	390	380	385	310	310	290	280	280	270	285	275	295	290	290	285	275	255	265	275	285			
CNT	17	15	16	12	12	11	14	10	6	2	2	2	12	9	12	14	17	16	17	14	16	16	13	17			
UQ	90	90	80	71	72	68	64	64	120	130	132	138	130	130	138	138	135	138	135	122	118	115	103	95			
LQ	78	73	64	58	54	50	44	84	112	123	120	115	116	122	120	115	118	115	116	94	90	71	58	70			
16F1	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U			
MEQ	620	686	620	686	620	686	620	686	620	686	620	686	620	686	620	686	620	686	620	686	620	686	620	686			
CNT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
16E	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U			
MEQ	180	455	300	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340			
CNT	5	14	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
16E	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U			
MEQ	141	105	101	99	99	99	99	99	99	99	99	99	99	99	99	99	99	105	111	101	101	101	101	101			
CNT	3	12	15	14	10	5	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
16E4	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U			
MEQ	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105			
CNT	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4			

SWEEP 1.0 MC TO 25.0 MC IN 30 SECONDS.

FEBRUARY, 1960

TUCUMAN, ARGENTINA (24+05-65+4w)

HOURL	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
16 F2	MEQ	175	135	157	139	78	55	49	83	175	121	121	137	143	144	154	165	171	172	176	160	153	165	171	160
	CNT	9	14	13	15	16	14	13	17	14	16	19	17	16	15	15	14	13	13	11	5	4	4	10	14
	UQ	90	90	80	71	72	68	64	120	130	132	138	130	130	138	138	135	138	135	122	118	115	103	95	
	LQ	78	73	64	58	54	50	44	84	112	123	120	115	116	122	120	115	118	115	116	94	90	71	58	70
16 F2	MEQ	315	360	355	350	340	305	305	340	360	335	310	295	295	245	260	285	285	290	295	295	265	280	290	300
	CNT	8	13	13	11	15	16	14	16	15	15	19	17	14	14	14	13	11	9	4	2	3	10	11	
	UQ	110	110	110	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	LQ	78	73	64	58	54	50	44	84	112	123	120	115	116	122	120	115	118	115	116	94	90	71	58	70
16 F1	MEQ	230	295	295	295	295	295	295	295	295	295	295	295	295	295	295	295	295	295	295	295	295	295	295	295
	CNT	7	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
	UQ	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	
	LQ	78	73	64	58	54	50	44	84	112	123	120	115	116	122	120	115	118	115	116	94	90	71	58	70
16 E	MEQ	131	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101
	CNT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	UQ	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	
	LQ	78	73	64	58	54	50	44	84	112	123	120	115	116	122	120	115	118	115	116	94	90	71	58	70
16 E	MEQ	131	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101
	CNT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	UQ	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	
	LQ	78	73	64	58	54	50	44	84	112	123	120	115	116	122	120	115	118	115	116	94	90	71	58	70
16 E4	MEQ	131	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101
	CNT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	UQ	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	
	LQ	78	73	64	58	54	50	44	84	112	123	120	115	116	122	120	115	118	115	116	94	90	71	58	70

TABLE 34

SCENCA IMONTE CAPELLINO, ITALY (44°N, 9°E)

[illegible]

WEEK 1 • MC TO : • MC IN : MINUTES • AUTOMATIC OPERATION •

NOVEMBER, 1959

TABLE 36

MUNDOARINO, W. AUSTRALIA (32.05.116.2E)

[illegible]

-KEEP 1.0 MC T. 16.0 MC IN 1 MINUTE +5 .E ONC=*

6561 • J. Neurosci., November 11, 2009 • 29(45):14051–14061

TABLE 33

RESOLUTE BAY, CANADA (74.7N, 96.9W)

[illegible]

SWEEP 1, M: TO 25.0 MC IN 27 SECONDS:

NOVEMBER, 1959

TABLE 5

QCMF, ITALY (4), 8N, 12-SE)

[illegible]

3660 1-4 M. TO 1-6 MIN. IN 2 MIN. • AUTOMATIC OPERATION*

NIV + MHE • 1959

1999

		PRIMA MESS. 22-05-2017 CANTIERE LAVORI INFERIORE																								TIME 0-0	
HOUR		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
16 F2	MED	6.1	5.9	5.3	5.2	5.5	5.4	7.5	7.5	5.7	5.7	4.7	4.7	8.6	8.2	6.3	7.9	7.9	8.2	8.7	9.5	9.2	7.0	5.8	5.3		
	LOW	2.8	2.6	2.1	2.1	2.6	2.6	2.4	2.4	2.4	2.1	2.1	2.1	2.6	2.6	2.3	2.3	2.6	2.6	2.3	2.1	2.1	2.2	2.2	2.3		
16 F2	MED					3.6	4	3	5	3.5	3.5	3.7	3.5	3.7	3.9	3.8	3.5	3.6									
	LOW									1.1	1	1	1	1	1	1	1	1	1								
16 F	MED	30.5	30.4	25.0	30.0	28.0	25.0	24.0	43.5	44.0	42.0	41.7	41.5	42.5	42.2	42.4	42.5	24.0	25.0	26.0	25.5	25.5	26.0	28.0	31.0		
	LOW	2.6	1.6	2.1	2.1	2.4	1.4	1.9	1.8	9	1.1	9	8	1.3	1.2	1.7	1.6	1.5	1.1	1.8	2.0	1.2	2.0	1.9	1.9		
(M3000)F2	MED																										
	LOW																										
16 F1	MED					4.00	5.10	5.30	5.70	5.50	5.70	6.00	5.50	5.90	5.30			1	1								
	CNT					4	3	4	8	7	12	12	13	10	13	7											
16 E	MED					24.0	25.0	32.0	35.0	36.0	37.0	38.0	36.0	36.0	35.0	34.0		31.0	28.0								
	CNT					13	18	22	22	23	13	13	9	12	17	16		16	17								
16 E	MED					11.5	10.5	10.5	10.5	10.2	10.5	10.5	10.5	10.5	10.0	10.0		10.0	10.5								
	CNT					3	12	21	23	24	22	13	15	9	12	16		18	18	1							
16 EA	MED	2.5	1.8	2.0	2.0	2.5	2.6	3.5	4.4	4.6	4.5	4.4	4.4	4.5	4.9	3.8		3.8	4.2	4.3	4.1	4.1	3.6	4.0	3.3		
	CNT	13	24	27	27	32	25	27	28	28	28	27	27	26	29	25		27	26	25	24	19	19	11	10		

KEEP 1.0 MC TO 10.0 MC.

AUGUST, 1959

①
②
③
④
⑤

[illegible]

SWEEP 1.5 MC TO 18.0 MC IN 5 MINUTES. MANUAL OPERATION.*

AUGUST, 1959

1. *Chlorophyll a* (Chl *a*)

[illegible]

$\sum_{w \in E} |e_w| = M$; M IN 27 SECONDS.

AUGUST, 1955

TABLE 47

GENOVA (MONTE CAPELLINO) - ITALY (44°44'N, 9°00'E)															TIME 15:50										
HOUR		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
f6F2	MED	76	75	73	68	63	61	60	78	86	88	90	93	94	94	92	90	90	89	88	93	98	89	86	80
	CNT	31	31	31	31	30	30	30	33	31	31	31	31	31	30	30	30	30	31	31	31	31	30	29	31
	LO																								
n'F2	MED																								
	CNT																								
	LO																								
n'F	MED	31.0	31.6	32.0	30.0	30.5	30.6	25.6	24.0	22.5	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	23.0	25.5	26.5	25.0	26.5	26.0	28.0
	CNT	31	28	30	31	29	30	28	28	27	26	25	26	25	22	22	23	24	27	26	30	30	27	27	29
	LO																								
IM3000IF2	MED																								
	CNT																								
	LO																								
f6F1	MED																								
	CNT																								
	LO																								
f6E	MED							20.0	27.0	32.0	35.0	46.0	37.0	38.0	38.0	37.0	36.0	34.0	32.0	26.0	21.0				
	CNT							20	30	31	31	31	31	31	31	31	31	31	31	31	18				
	LO																								
n'E	MED																								
	CNT																								
	LO																								
f6E1	MED	34	33	22	23	20	20	27	38	40	44	46	50	49	50	48	41	39	39	36	31	36	44	44	39
	CNT	31	31	31	31	30	30	30	30	31	31	31	31	29	30	30	30	30	31	30	31	31	31	31	31
	LO																								

SWEEP 1.0 MC TO 20.0 MC IN 5 MINUTES • AUTOMATIC OPERATION •

AUGUST, 1959

TABLE 49

AMMEQABAO, INQIA (23.ON, 72.6E)

TIME 75.0E

HOUR		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
f6F2	MED	90	86	74	72	70	72	84	102	105	102	112	119		136	137	160	160	160	139	140	129	110	102	89
	CNT	19	14	18	14	11	19	19	20	19	21	24	21		22	23	25	24	23	23	21	22	24	20	17
	UG																								
f6F2	MED									250	300	340	365		400	400	350	360	320						
	CNT								1	16	21	21	18		22	22	25	23	22						
	UG																								
f6F	MED																								
	CNT																								
	UG																								
f6M3000F2	MED	250	260	250	250	255	270	295	310	305	275	250	240		240	245	250	250	245	265	270	275	240	255	250
	CNT	18	14	17	18	16	19	22	20	19	20	23	18		19	13	18	9	7	13	20	22	24	20	
	UG																								
f6F1	MED									340	480	530	610		630	630	640	600	600	550					
	CNT								2	4	7	9	5		11	11	13	15	10						
	UG																								
f6E	MED									E	270	350	400					380	300	240					
	CNT								12	10	3	3		1		2	7	7	10	10					
	UG																								
f6E	MED									110	115	110	110					110	120	125					
	CNT								3	8	3	3	1					10	11	7					
	UG																								
f6E1	MED	20	18	E	E					36	40	51	63		58	65	63	64	61	67	68	26	24	24	19
	CNT	21	21	22	22	21	22	20	21	22	20	21	22	18	19	15	13	15	15	21	24	24	24	22	
	UG																								

SWEEP 0.6 MC TO 25.0 MC IN 5 MINUTES. AUTOMATIC OPERATION.

AUGUST, 1954

TABLE 51

MACAU 122.2N, 113.6E)

TIME 120.08

[illegible]

<SWEEP 1.6 MC TO 20.0 MC IN 15 SECONDS.

AUGUST, 1969

TABLE 50

CALCUTTA. INOIA 123.0N, 88.6E)

TIME 90.0E

HOUR		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
to F2	MED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CNT	100	95	70	60	50	40	30	20	15	10	5	0	0	0	0	0	0	0	0	0	0	0	0	0
	LO	12	10	11	11	11	10	11	12	12	11	10	9	8	10	10	11	12	12	13	13	12	12	12	10
to F2	MED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CNT	100	95	70	60	50	40	30	20	15	10	5	0	0	0	0	0	0	0	0	0	0	0	0	0
	LO	12	10	11	11	11	10	11	12	12	11	10	9	8	10	10	11	12	12	13	13	12	12	12	10
to F2	MED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CNT	100	95	70	60	50	40	30	20	15	10	5	0	0	0	0	0	0	0	0	0	0	0	0	0
	LO	12	10	11	11	11	10	11	12	12	11	10	9	8	10	10	11	12	12	13	13	12	12	12	10
to F2	MED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CNT	100	95	70	60	50	40	30	20	15	10	5	0	0	0	0	0	0	0	0	0	0	0	0	0
	LO	12	10	11	11	11	10	11	12	12	11	10	9	8	10	10	11	12	12	13	13	12	12	12	10
to F2	MED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CNT	100	95	70	60	50	40	30	20	15	10	5	0	0	0	0	0	0	0	0	0	0	0	0	0
	LO	12	10	11	11	11	10	11	12	12	11	10	9	8	10	10	11	12	12	13	13	12	12	12	10
to F2	MED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CNT	100	95	70	60	50	40																		

SWEEP 1.0 MC TO 13.0 MC (N) 1 MINUTE 55 SECONDS.

AUGUST • 1959

TABLE 52

GOMBAY: INDIA 119.0N, 72.8E

TIME 75.0E

[illegible]

SWEPT 1.5 MC TO 18.0 MC IN 5 MINUTES. MANUAL OPERATION.

AUGUST, 1959

TABLE 57

WINDUPTON, ** AUSTRALIA 132+05+ 110+2E1

TIME 1200-16

HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
f6F2	MEQ CNT LO	11 14 13	11 15 16	10 15 17	10 18 18	10 18 15	10 18 15	10 18 15	05 08 06	05 08 06	05 08 06	05 08 06	05 08 06	05 08 06	05 08 06	05 08 06	05 08 06	05 08 06	05 08 06	05 08 06	05 08 06	05 08 06	05 08 06	05 08 06
h'F2	MEQ CNT LO																							
h'F	MEQ CNT LO	250 15 13	260 17 15	265 17 15	255 13 14	250 14 16	255 14 16	250 16 17	230 17 15	230 17 15	230 17 15	230 17 15	230 17 15	230 17 15	230 17 15	230 17 15	230 17 15	230 17 15	230 17 15	230 17 15	230 17 15	230 17 15	230 17 15	230 17 15
IM3000IF2	MEQ CNT LO	320 10 15	310 15 17	315 15 17	320 16 13	310 16 13	300 16 13	315 16 13	310 16 13	310 16 13	310 16 13	310 16 13	310 16 13	310 16 13	310 16 13	310 16 13	310 16 13	310 16 13	310 16 13	310 16 13	310 16 13	310 16 13	310 16 13	310 16 13
f6FI	MEQ CNT																							
f6E	MEQ CNT																							
h'E	MEQ CNT																							
f6Ea	MEQ CNT																							

SWEEP 1.0 MC TO 18.0 MC IN 1 MINUTE 45 SECONDS.

AUGUST, 1959

TABLE 58

MAACON 157+55+ 62+9E1

TIME 0-40

HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
f6F2	MEQ CNT LO				2	3	3	5	105	118	110	110	105	104	9	6	2	1						
h'F2	MEQ CNT LO																							
h'F	MEQ CNT LO				2	3	3	240	440	230	250	250	230	255	9	6	2	1						
IM3000IF2	MEQ CNT LO				2	3	3	300	240	305	300	300	300	310	9	6	2	1						
f6FI	MEQ CNT																							
f6E	MEQ CNT																							
h'E	MEQ CNT																							
f6Ea	MEQ CNT																							

SWEEP 1.0 MC TO 20.0 MC IN 15 SECONDS.

AUGUST, 1959

TABLE 59

RESOLUTE BAY, CANADA 178+7N, 94+9W1

TIME 0100-16

HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
f6F2	MEQ CNT LO	27 21 21	56 21 22	56 21 21	56 20 20	56 20 20	56 20 20	56 20 20	56 20 20	56 20 20	56 20 20	56 20 20	56 20 20	56 20 20	56 20 20	56 20 20	56 20 20	56 20 20	56 20 20	56 20 20	56 20 20	56 20 20	56 20 20	56 20 20
h'F2	MEQ CNT LO	2 4 6	50 6 6	400 400 400	400 400 400	400 400 400	400 400 400	400 400 400	400 400 400	400 400 400	400 400 400	400 400 400	400 400 400	400 400 400	400 400 400	400 400 400	400 400 400	400 400 400	400 400 400	400 400 400	400 400 400	400 400 400	400 400 400	400 400 400
h'F	MEQ CNT LO	280 20 21	270 19 20	250 19 20	240 19 20	230 19 20	220 19 20	210 19 20	200 19 20	190 19 20	180 19 20	170 19 20	160 19 20	150 19 20	140 19 20	130 19 20	120 19 20	110 19 20	100 19 20	90 19 20	80 19 20	70 19 20	60 19 20	50 19 20
IM3000IF2	MEQ CNT LO	270 18 15	250 15 13	230 15 13	210 15 10	190 15 10	170 15 10	150 15 10	130 15 10	110 15 10	90 15 10	70 15 10	50 15 10	30 15 10	10 15 10	10 15 10	10 15 10	10 15 10	10 15 10	10 15 10	10 15 10	10 15 10	10 15 10	10 15 10
f6FI	MEQ CNT	3 3 7	380 360 360	360 360 360	360 360 360	360 360 360	360 360 360	360 360 360	360 360 360	360 360 360	360 360 360	360 360 360	360 360 360	360 360 360	360 360 360	360 360 360	360 360 360	360 360 360	360 360 360	360 360 360	360 360 360	360 360 360	360 360 360	360 360 360
f6E	MEQ CNT	230 16 17	220 17 18	240 17 18	250 18 17	270 18 17	280 17 17	300 17 17	310 18 17	320 18 17	330 18 17	340 18 17	350 15 15	360 15 15	370 15 15	380 15 15	390 15 15	400 15 15	410 15 15	420 15 15	430 15 15	440 15 15	450 15 15	460 15 15
h'E	MEQ CNT	110 14 13	110 13 14	110 14 14	100 14 13	100 14 13	100 14 13	100 14 13	100 14 13	100 14 13	100 14 13	100 14 13	100 14 13	100 14 13	100 14 13	100 14 13	100 14 13	100 14 13	100 14 13	100 14 13	100 14 13	100 14 13	100 14 13	100 14 13
f6Ea	MEQ CNT																							

SWEEP 1.0 MC TO 25.0 MC IN 27 SECONDS.

JULY, 1959

TABLE 60

DE MOINE, IA 42N045W 1A 150+0N, 14+0E1

TIME 0-40

HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
f6F2	MEQ CNT LO	68 28 28	65 28 28	65 28 28	65 28 28	65 28 28	65 28 28	65 28 28	65 28 28	65 28 28	65 28 28	65 28 28	65 28 28	65 28 28	65 28 28	65 28 28	65 28 28	65 28 28	65 28 28	65 28 28	65 28 28	65 28 28	65 28 28	
h'F2	MEQ CNT LO																							
h'F	MEQ CNT LO	100 27 27	275 27 27	280 27 27	290 27 27	290 27 27	290 27 27	290 27 27	290 27 27	290 27 27	290 27 27	290 27 27	290 27 27	290 27 27	290 27 27	290 27 27	290 27 27	290 27 27	290 27 27	290 27 27	290 27 27	290 27 27	290 27 27	
IM3000IF2	MEQ CNT LO	270 18 15	250 15 13	230 15 10	210 15 10	190 15 10	170 15 10	150 15 10	130 15 10	110 15 10	90 15 10	70 15 10	50 15 10	30 15 10	10 15 10	10 15 10	10 15 10	10 15 10	10 15 10	10 15 10	10 15 10	10 15 10	10 15 10	
f6FI	MEQ CNT																							
f6E	MEQ CNT																							
h'E	MEQ CNT																							
f6Ea	MEQ CNT																							

SWEEP 1.0 MC TO 18.0 MC.

JULY, 1959

TABLE 69

OTTAWA, CANADA (45.4N, 75.9W)

TOWNSVILLE, AIR, THALIA 119.35, 146.751

[illegible]

SWEEP 1.0 MC TO 20.0 MC IN 16 SECONDS.

APRIL, 1959

TABLE 71

TRELAW, ARGENTINA 143, 25, 65, 111

TIME 60.0W

[illegible]

SWEEP 1.3 MC TO 18.0 MC IN 30 SECONDS.

JANUARY, 1959

TABLE IV

TOWNSVILLE, AIR, THALIA 119.35, 146.751

TIME 150.0E

[illegible]

30 SECS 1.0 MC TO 1.0 MC IN 1 MINUTE \$5 SECONDS*

JANUARY, 1959

TABLE 72

149.45, 70.3E1

TIME 75.0E

MOIR		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
16F2	MED	48	40	42	42	49	58	65	70	73	73	73	73	73	70	78	76	70	66	65	62	58	64	62	48
	CMT	14	11	8	5	8	13	10	9	9	8	7	6	6	8	9	8	15	22	23	21	22	16	22	15
	UO																								
	LO																								
16F2	MED	100	225	242	262	325	275	260	236	225	320	420	223	225	210	210	232	230	230	245	266	270	265	275	260
	CMT	17	21	19	18	20	18	19	12	14	15	15	16	16	9	12	8	16	18	21	19	18	20	23	21
	UO																								
	LO																								
(M3000)F2	MED	240	232			238	238			18	17	19	18	19	20	18	24	25	26	265	238	270	265	260	
	CMT	10	6	6	3	8	14	13	19	18	17	19	18	19	20	18	24	25	26	265	238	270	265	260	
	UO																								
	LO																								
16F1	MED						450	510		510	520	540	560	550	550	540	530	500	460						
	CMT						1	9	11	17	18	18	19	15	21	15	22	21	16	6					
	UO																								
	LO																								
16E	MED			E	F	155	210	275	320	360	370	400	405	410	400	390	380	370	320	300	250	180	E	E	
	CMT					9	16	13	7	10	8	7	9	9	8	4	9	11	12	18	21	13	10	4	2
	UO																								
	LO																								
16E	MED			E		120	115	110	100	100	100	100	100	100	100	100	100	102	100	108	112	120	E	E	
	CMT					6	8	11	18	17	20	18	17	15	20	21	18	21	22	23	24	10	10	4	2
	UO																								
	LO																								
16E4	MED	32	28	30	29	25	21	25	16	22	15	16	16	16	52	43	45	42	38	32	32	32	32	28	28
	CMT	27	45	26	21	21	24	20	18	22	16	18	18	18	21	19	23	23	22	25	22	25	21	26	26
	UO																								
	LO																								

C. W. F. P. 1. 2. M. T. 17-0 MC-

0301-0303/98/0000-0000\$05.00/0

TABLE 73

OECEPCION 1. 163.05. 60.1M)

[illegible]

SWEEP 1.3 MC TO 18.0 MC IN 30 SECONDS.

DECEMBER, 1958

TABLE 74

TERRE AOELIE 166.75. 140.00€

[illegible]

SWEEP 1.2 MC TO 17.0 MC IN 1 MINUTE.

DECEMBER, 1958

TABLE 75

PRUHONICE, CZECHOSLOVAKIA 150.0N, 14.6E)

[illegible]

KEEP 1.0 MC TO 18.0 MC.

NOVEMBER • 1958

TABLE 76

SALISBURY, SOUTHERN ROQESIA (17.05. 31. E)

[illegible]

SWEEP 1.0 MC TO 16.0 MC IN 7 SECONDS.

NOVEMBER, 1958 19

TABLE 7a

MACQUARIE IS. 154.55, 159.0E1

TIME 75.0E

[illegible]

SWEEP 1.0 MC TO 13.0 MC IN 1 MINUTE \$5 SECONDS.

NOVEMBER, 1958

TABLE 80

JULIUSRUH/RUGEN, GERMANY (54°6'N, 13°4'E)

TIME 135.0E

[illegible]

SWEEP 0.5 MC TO 20.0 MC IN 20 SECONDS.

NOVEMBER, 1958

TABLE 1

XERGIFLEN (149-45, 70, 35)

TIME 75.0E

[illegible]

SWEEP 1.2 MC TO 17.0 MC.

NOVEMBER, 1958

TABLE 79

TERRE ADELIE (66° 7'S, 140° 0'E)

TIME 135.0E

[illegible]

SWEEP 1.2 MC TO 17.0 MC IN 1 MINUTE.

NOVEMBER, 1958

REGULLEN 1, 149-55, 70-2E1

		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
16F2	MED	22	24	20	18	22	23	22	49	66	92	119	125	130	132	130	129	128	127	66	42	37	31	30	
	CNT	0	5	0	3	4	4	7	10	10	6	5	11	15	15	14	15	15	8	6	11	17	14		
	U																								
	LO																								
16F2	MED																								
	CNT																								
	U																								
	LO																								
16F	MED	278	305	305	300	320	345	300	280	450	245	240	250	240	242	242	445	240	440	230	230	232	252	260	
	CNT	9	6	3	3	5	4	7	15	20	18	13	13	13	11	12	13	17	16	17	21	20	11	10	
	U																								
	LO																								
IM3000IF2	MED	270	268	255	270	245	250	248	245	325	315	310	280	285	275	270	280	292	255	265	305	300	295	270	
	CNT	3	2	1	1	3	4	6	3	5	4	2	9	7	5	5	6	4	1	2	7	13	8	5	
	U																								
	LO																								
16F1	MED																								
	CNT																								
	U																								
	LO																								
16E	MED																								
	CNT																								
	U																								
	LO																								
16E	MED																								
	CNT																								
	U																								
	LO																								
16E	MED																								
	CNT																								
	U																								
	LO																								
16E	MED																								
	CNT																								
	U																								
	LO																								

SWEEP 0.88 MC TO 14.14 MC IN 10 MINUTES, AUTOMATIC OPERATION.

AUGUST, 1958

TABLE 91

		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
16F2	MED	U	18	41	40	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	CNT	15	14	4	8	10	8	6	12	11	11	6	9	2	7	7	8	9	13	10	11	14	10	8	11
	U																								
	LO																								
16F2	MED																								
	CNT																								
	U																								
	LO																								
16F	MED	250	250	250	270	275	285	275	270	260	260	250	250	250	250	250	250	250	250	250	250	250	248	250	
	CNT	22	20	21	17	19	14	13	18	10	19	16	13	20	21	19	20	21	22	23	25	25	22	24	
	U																								
	LO																								
IM3000IF2	MED	285	272	375	260	230	270	288		275	295	250		260	260	290	280	260	265	250	275	265	265		
	CNT	6	4	1	1	2	1	2	2	2	2	1		1	1	3	1	3	4	3	7	3	3		
	U																								
	LO																								
16F1	MED																								
	CNT																								
	U																								
	LO																								
16E	MED																								
	CNT																								
	U																								
	LO																								
16E	MED																								
	CNT																								
	U																								
	LO																								
16E	MED																								
	CNT																								
	U																								
	LO																								
16E	MED																								
	CNT																								
	U																								
	LO																								

SWEEP 1.2 MC TO 37.0 MC IN 1 MINUTE.

AUGUST, 1958

TABLE 91

CAMPBELL 1, 152-55, 105-2E1

		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
16F2	MED	53	49	46	47	46	40	41	38	40	100	108	118	112	114	115	105	105	103	85	75	66	61	58	58
	CNT	13	10	10	10	11	11	11	11	11	24	26	18	18	14	14	14	13	10	17	21	23	20	20	21
	U																								
	LO																								
16F2	MED																								
	CNT																								
	U																								
	LO																								
16F	MED	295	295	290	270	250	250	250	250	230	230	250	220	225	220	230	230	230	230	240	250	280	290	300	
	CNT	28	26	26	26	26	27	29	28	30	29	29	28	30	27	28	28	28	26	27	28	27	27	27	
	U																								
	LO																								
IM3000IF2	MED	252	260	255	265	270	270	280	302	310	305	300	295	292	280	270	280	292	285	285	27				

TABLE 97

JULIUSRUH/RUGEN • GERMANY (54.6N • 13.4E)

	hour	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
f6F2	MED CNT LO	55 29 50	55 29 50	55 29 50	57 29 50	55 28 50	55 28 50	76 30 50	85 30 50	85 30 50	85 30 50	86 29 50	86 29 50	97 24 50	97 24 50	103 24 50	100 23 50	103 22 50	98 25 50	98 25 50	93 27 50	93 27 50	71 20 50	71 20 50	71 20 50
f6F2	MED CNT LO								U	U	420 5	460 4	460 11	460 10	440 9	440 6	440 3								
f6F	MED CNT LO	580 30 30	560 30 30	565 30 30	540 30 30	340 30	315 30	280 29	260 30	250 30	240 30	240 30	235 30	240 28	240 28	240 27	250 26	260 28	270 29	285 28	290 27	300 27	320 30	360 30	360 30
f6F	MED CNT LO	220 28	220 28	220 27	220 27	230 25	245 27	265 29	265 30	260 30	250 26	240 28	240 24	240 25	240 22	240 20	245 19	265 21	265 21	265 22	265 21	265 20	265 20	265 20	265 20
f6F	MED CNT LO									1	6	6	3	3	3	3	1								
f6E	MED CNT		E	E	E	E	155 22	230 22	276 26	320 29	350 29	345 27	375 27	380 25	380 25	365 28	360 26	325 24	295 25	265 25	245 20	2			
f6E	MED CNT																								
f6E	MED CNT		E	10	10	E	G	G	G	U	38	39	38	38	37	34	33	G	G	G	20	13			
f6E	MED CNT		21	24	26	27	18	20	23	30	28	22	20	22	25	26	25	24	23	20	11	5	1		

SWEEP 0.5 MC TO 20.0 MC IN 20 SECONDS.

APRIL, 1958

TABLE 1 99

[illegible]

SWEEP 1005 MC TO 2000 MC IN 20 SECONDS.

MURRAY • 1978

TABLE 98

MAW-ON 167.65. 62.9E1

WDR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
f6 F2	MED CNT								U	68	74	88	70	65										
	U	3	2	2	1	4	2	2	5	3	6	5	6	5										
	U	82	93	90	88	75	68		82	93	90	88	75	68										
	U	52	72	68	66	65	45		52	72	68	66	65	45										
n' F2	MED CNT								U	3	3	4	2											
	U	4	3	3	2	1	2	3	2	5	4	6	6											
n' F	MED CNT								U	240	240	245												
	U	4	3	3	2	1	2	3	2	5	4	6	6											
	U	260	260	260	300	300	300		260	260	260	300	300											
IM3000F2	MED CNT								U	3	3	5	5											
	U	1	1	2	2	1	2	2	4	3	5	5												
f6 F1	MED CNT								U	520	470		2											
	U	1	2	1	2	3	4		4	4	6	5												
f6 E	MED CNT								U	360														
	U	3	2	2	5	4	3	5	3	3														
n' E	MED CNT								U	1														
f6 EA	MED CNT								U	33														
	U	3	2	2	1	2	4	1	3	1	4	5	3	3	3	3	30	43	50	0	45	40	35	21
	U	5	3	2	2	1	2	4	1	3	1	4	5	3	3	3	6	5	4	7	5	7	6	6

SWEEP 1.0 MC TO 25.0 MC IN 25 SECONDS.

FEBRUARY, 1958

TABLE 120

MACQUARIE I. (54.55, 159.06)

HOUR	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
tsF2 MED CMT UO LQ	1	3	4	56 56 54	4	3	4	3	2	3	3	2	4	4	4	4	72 78 68	4	4	2	1	4	3	1
h'F2 MED CMT UO LQ																								
h'F MED CMT UO LQ	2	3	4	3	3	3	3	2	2	3	3	2	4	4	4	3	4	3	3	1	1	3	2	1
IM3000F2 MED CMT UO LQ	2	3	3	3	2	2	2	2	1	3	3	2	4	3	3	3	2	3	1	1		2	1	
tsFI MED CMT																								
tsE MED CMT				1	4	4	4	4	3	2	3	3	2	4	4	3	4	3	4	2	1			
h'E MED CMT				1	4	3	3	3	2	2	3	3	2	4	4	3	4	3	3	1	1			
tsEs MED CMT	3	5	4	44 38	5	3	4	3	2	2	1	3	2	4	4	3	4	4	3	4	4	4	4	3

THE UNIVERSITY OF CHICAGO

JANUARY, 1958

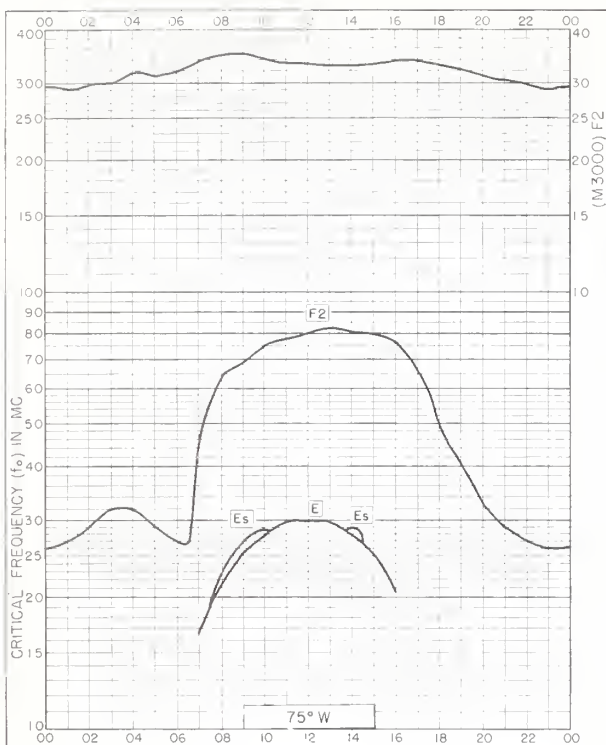


Fig 1. WASHINGTON, D.C.
38.7°N, 77.1°W

NOVEMBER 1961

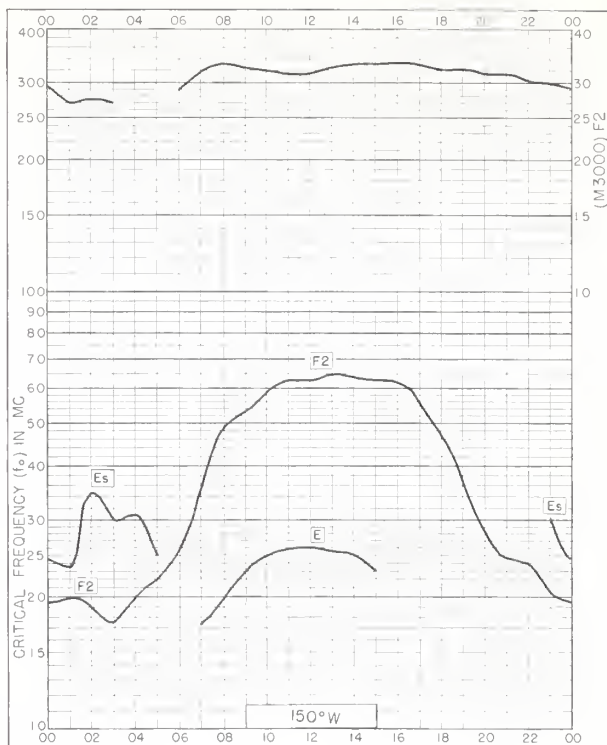


Fig 2. ANCHORAGE, ALASKA
61.2°N, 149.9°W

OCTOBER 1961

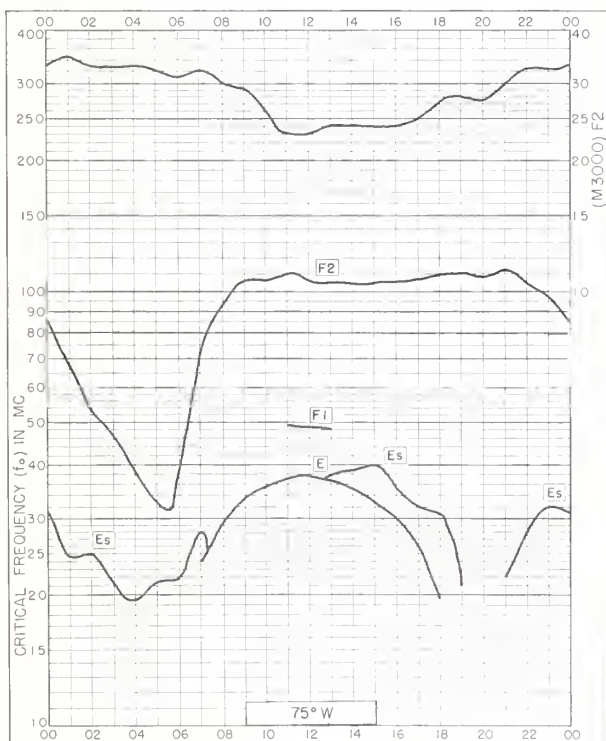


Fig 3. TALARA, PERU
4.6°S, 81.3°W

OCTOBER 1961



Fig 4. HUANCAYO, PERU
12.0°S, 75.3°W

OCTOBER 1961

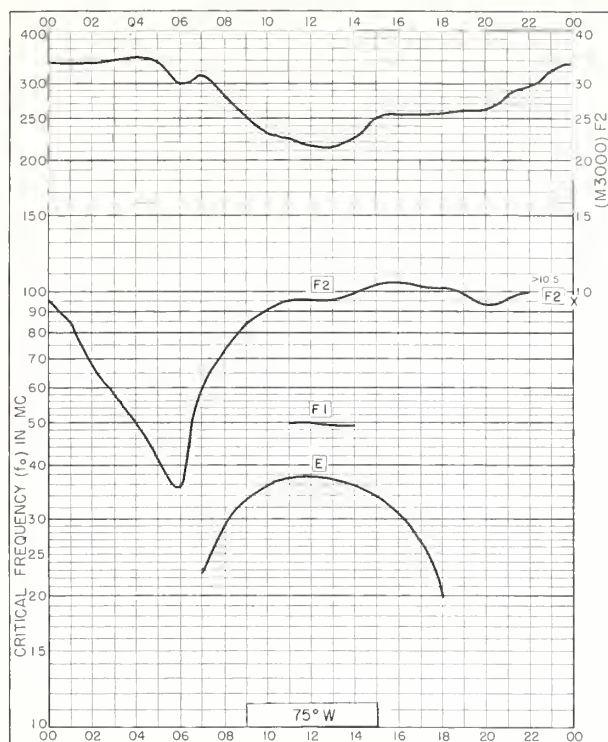


Fig. 5. TALARA, PERU
4.6°S, 81.3°W
SEPTEMBER 1961

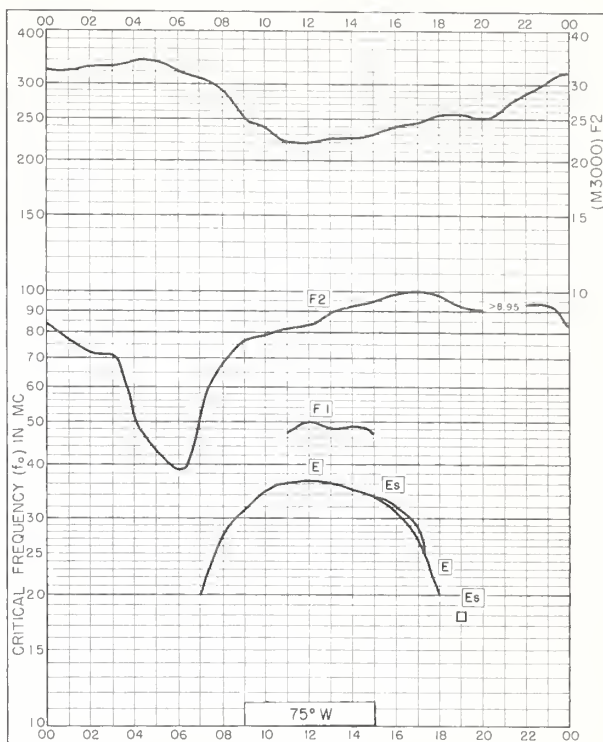


Fig. 6. TALARA, PERU
4.6°S, 81.3°W
AUGUST 1961



Fig. 7. HUANCAYO, PERU
12.0°S, 75.3°W
AUGUST 1961

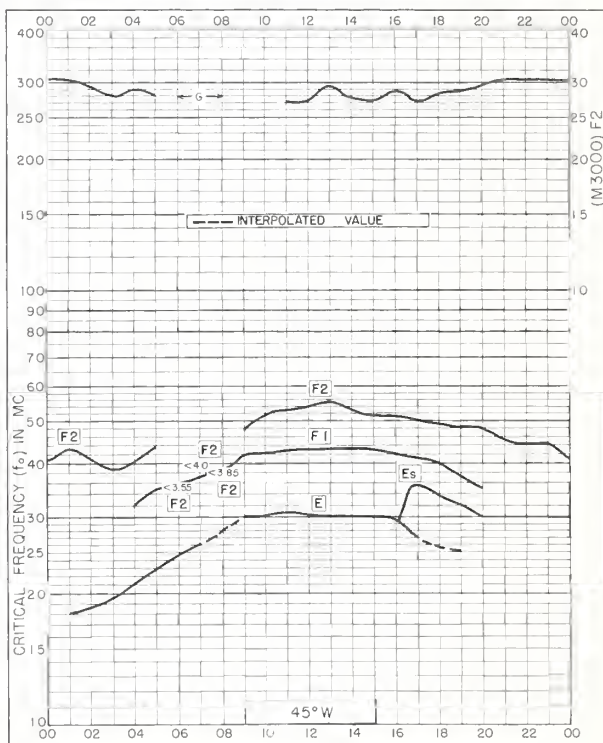


Fig. 8. GODHAVN, GREENLAND
69.3°N, 53.5°W
JULY 1961

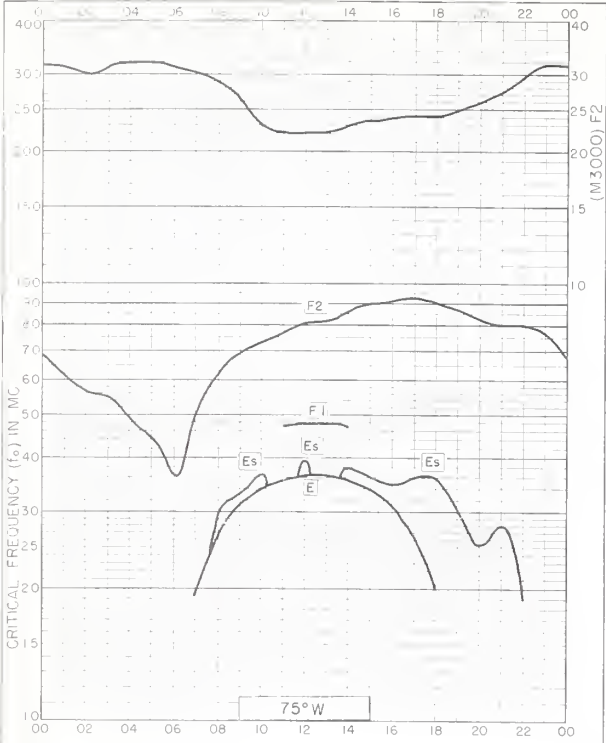


Fig 9. TALARA, PERU
4 6°S, 81.3°W
JULY 1961

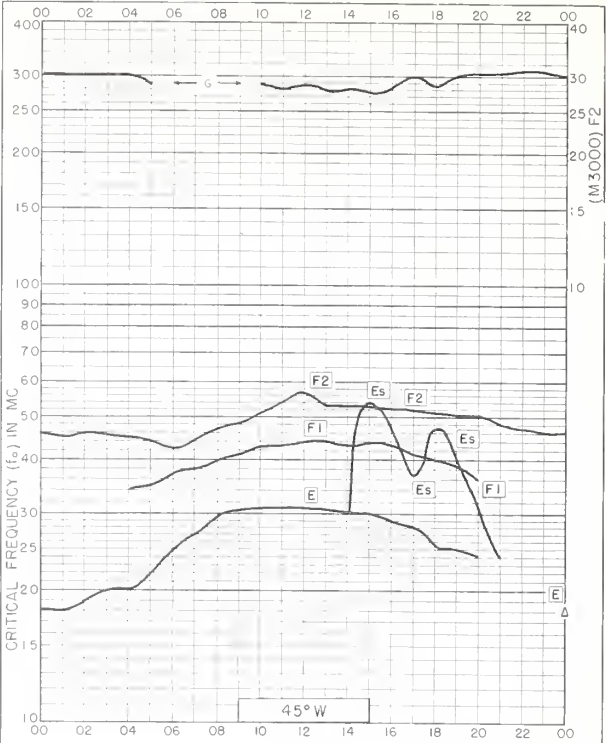


Fig 10. GODHAVN, GREENLAND
69.3°N, 53.5°W
JUNE 1961

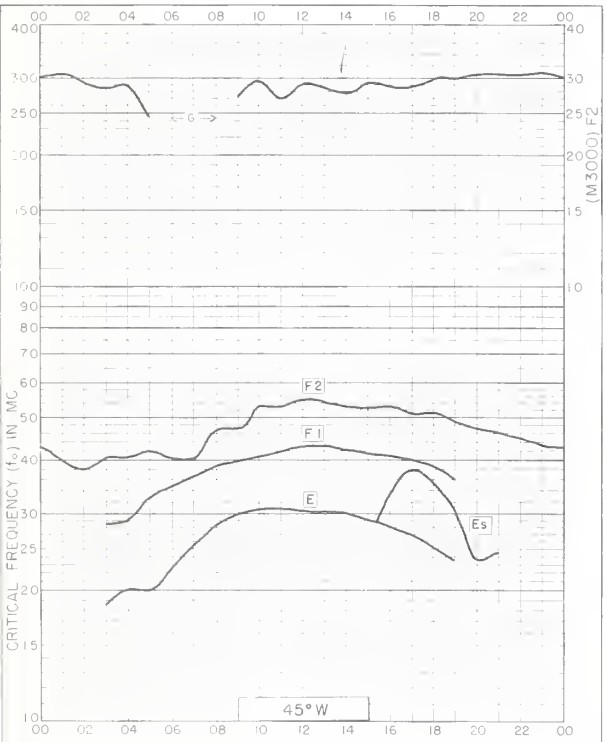


Fig 11. GODHAVN, GREENLAND
69 3°N, 53 5°W
MAY 1961

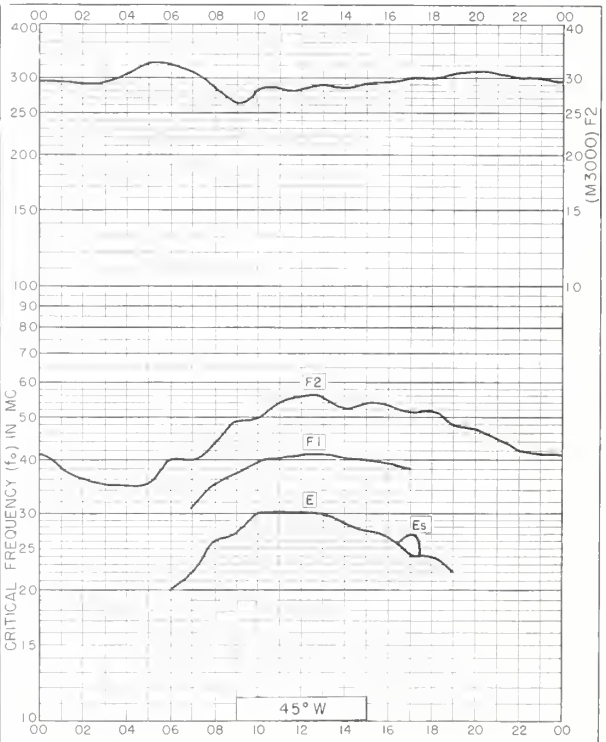


Fig 12. GODHAVN, GREENLAND
69.3°N, 53.5°W
APRIL 1961

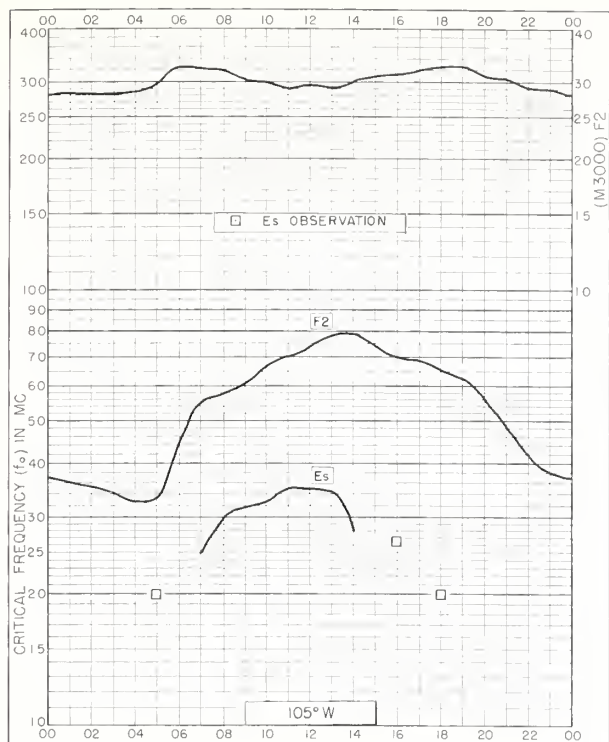


Fig. 13. BOULDER, COLORADO
40.0°N, 105.3°W

APRIL 1961

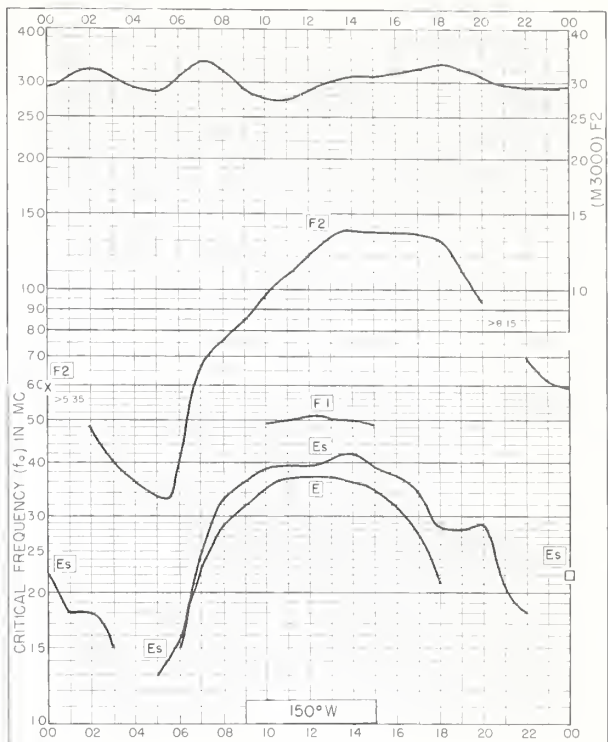


Fig. 14. MAUI, HAWAII
20.8°N, 156.5°W

APRIL 1961

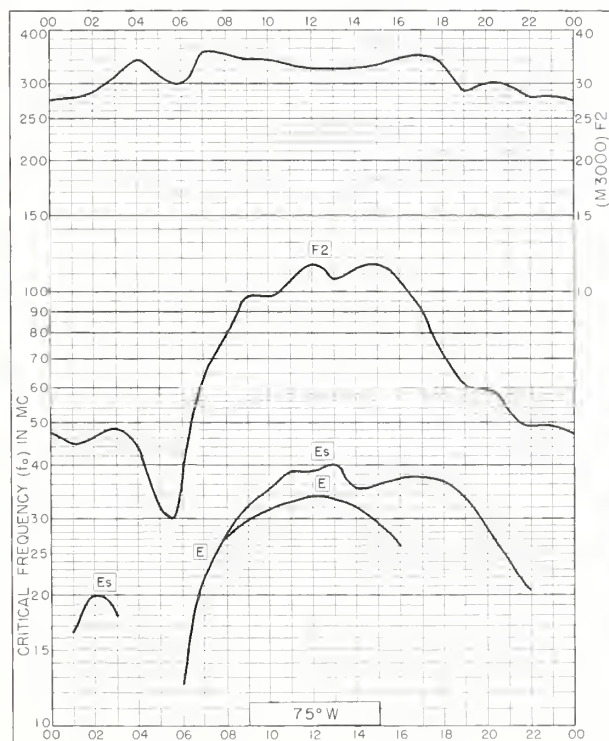


Fig. 15. CONCEPCION, CHILE
36.6°S, 73.0°W

APRIL 1961

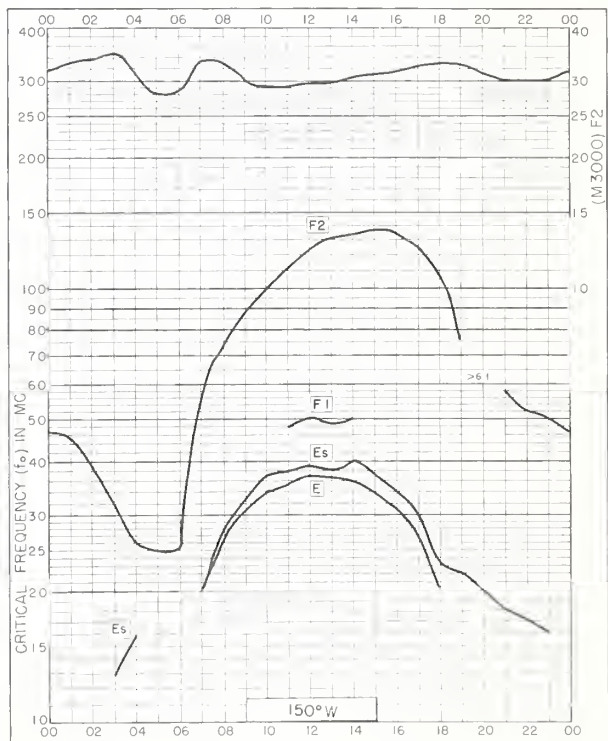


Fig. 16. MAUI, HAWAII
20.8°N, 156.5°W

MARCH 1961

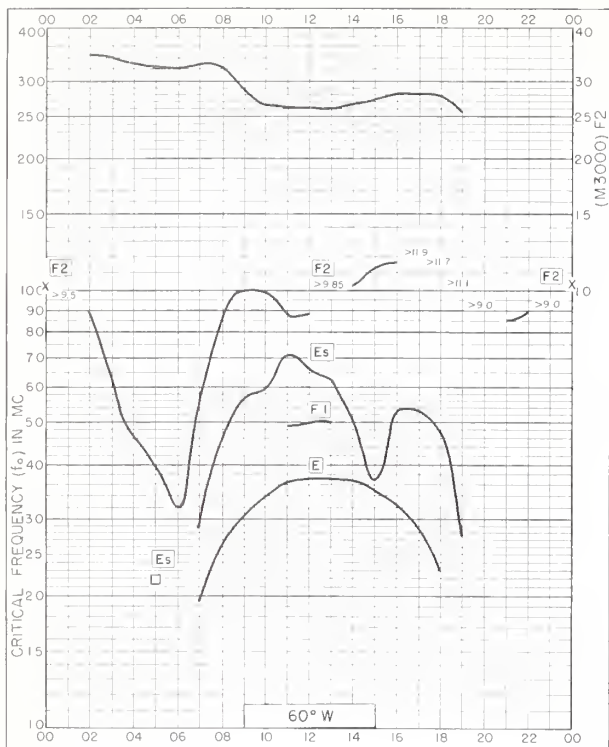


Fig 17 La PAZ, BOLIVIA
16.5°S, 68.1°W

MARCH 1961

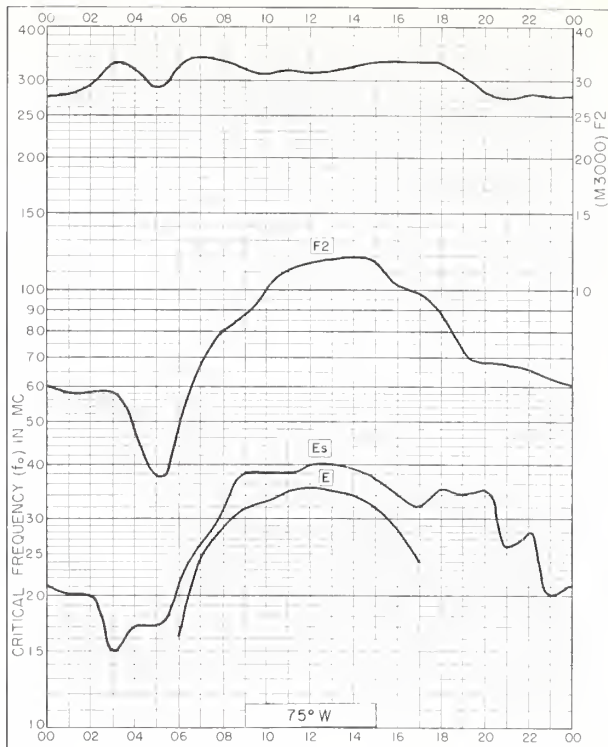


Fig 18 CONCEPCION, CHILE
36.6°S, 73.0°W

MARCH 1961

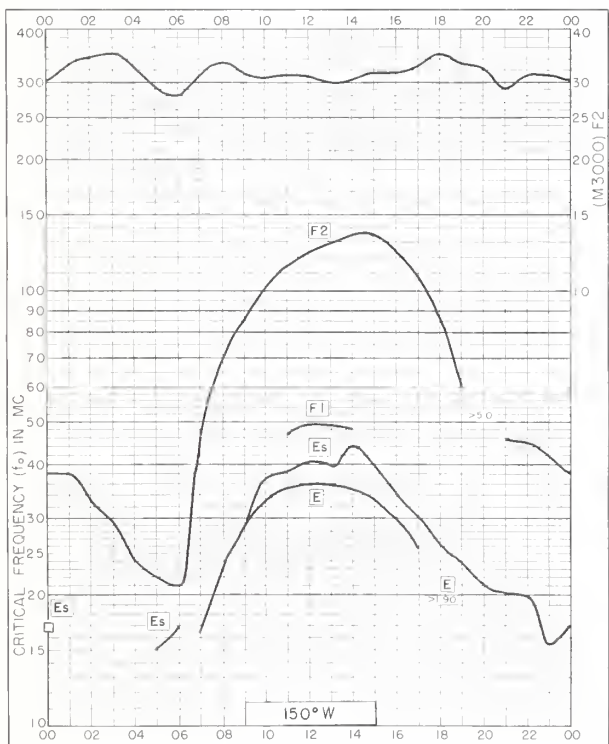


Fig 19 MAUI, HAWAII
20.8°N, 156.5°W

FEBRUARY 1961

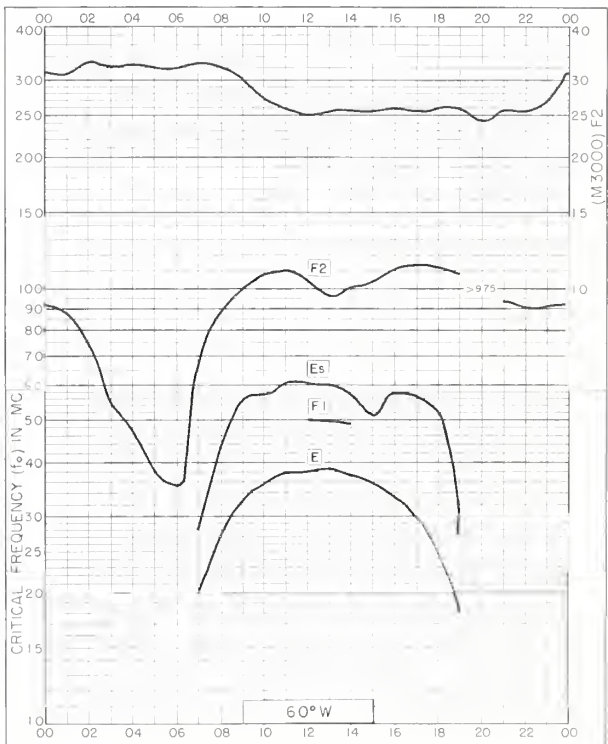


Fig 20 La PAZ, BOLIVIA
16.5°S, 68.1°W

FEBRUARY 1961

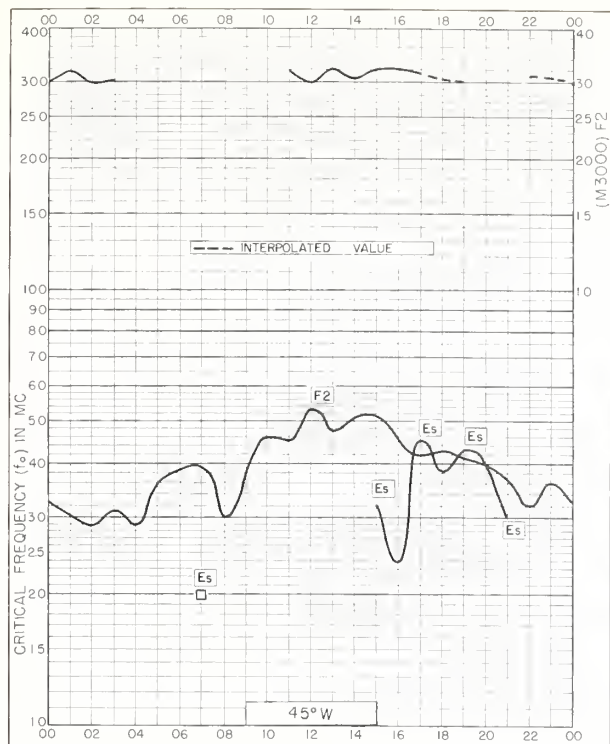


Fig. 21. GODHAVN, GREENLAND
69.3°N, 53.5°W JANUARY 1961

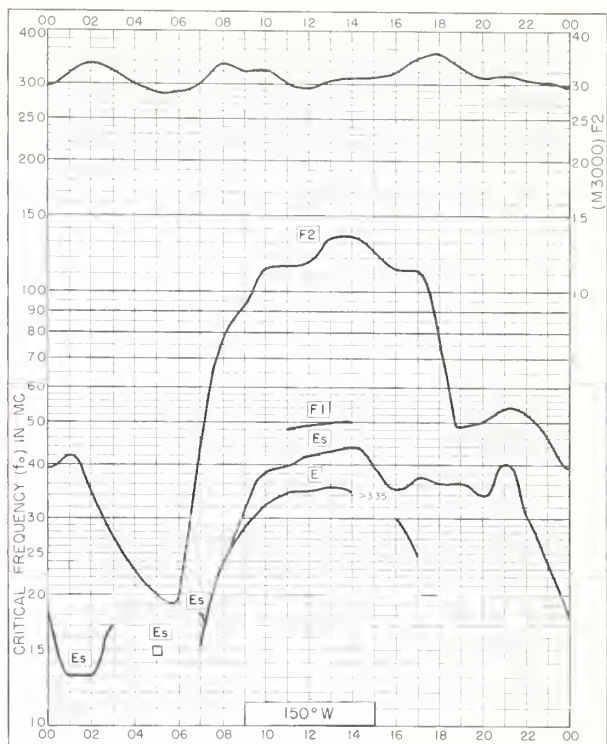


Fig. 22. MAUI, HAWAII
20.8°N, 156.5°W JANUARY 1961

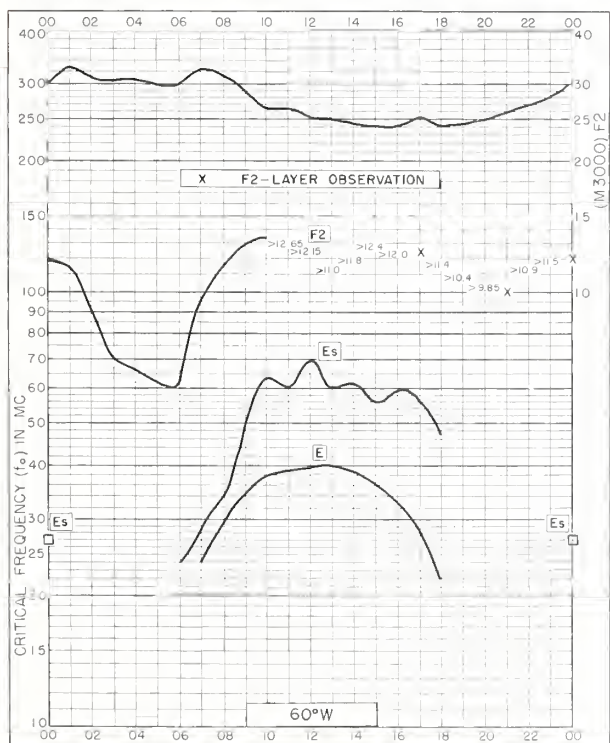


Fig. 23. La PAZ, BOLIVIA
16.5°S, 68.1°W OCTOBER 1960

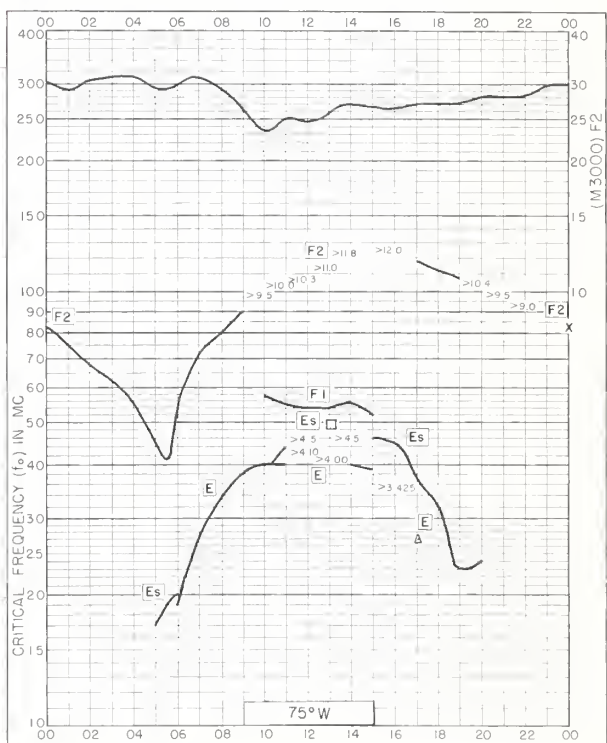


Fig. 24. BOGOTA, COLOMBIA
4.5°N, 74.2°W AUGUST 1960

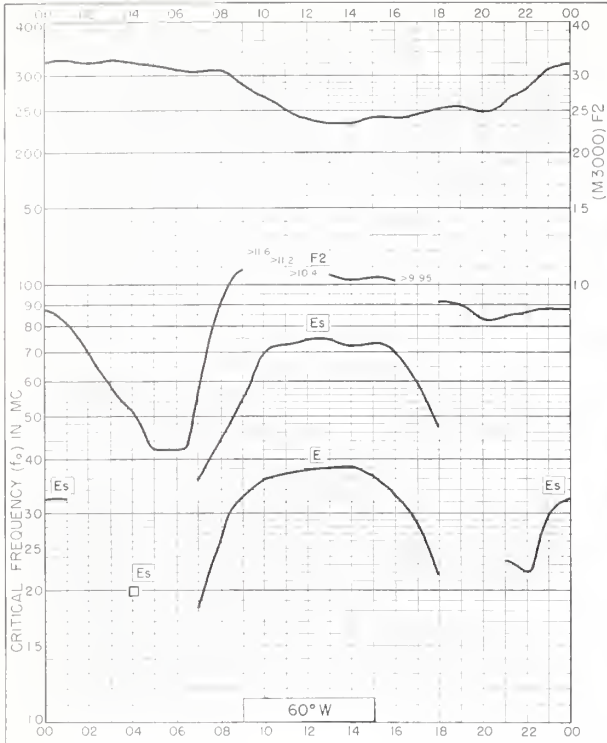


Fig 25. La PAZ, BOLIVIA
 16.5°S , 68.1°W AUGUST 1960

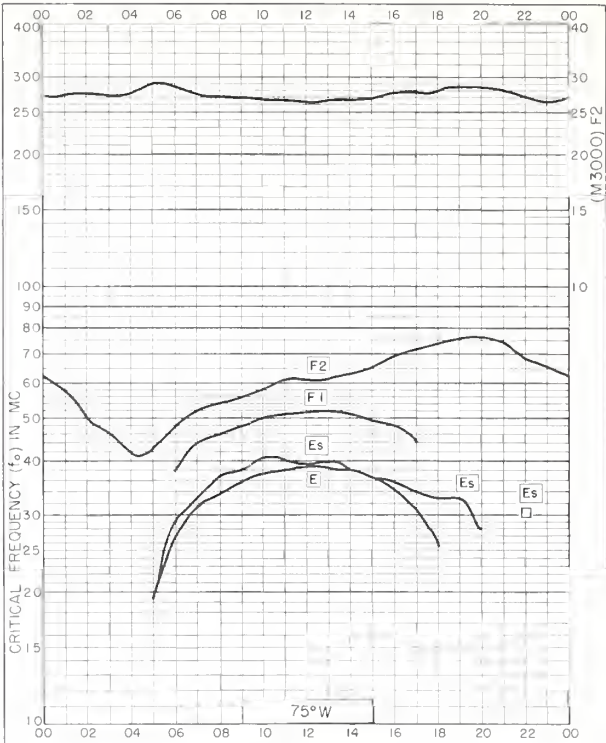


Fig 26. FT. MONMOUTH, NEW JERSEY
 40.4°N , 74.1°W JUNE 1960

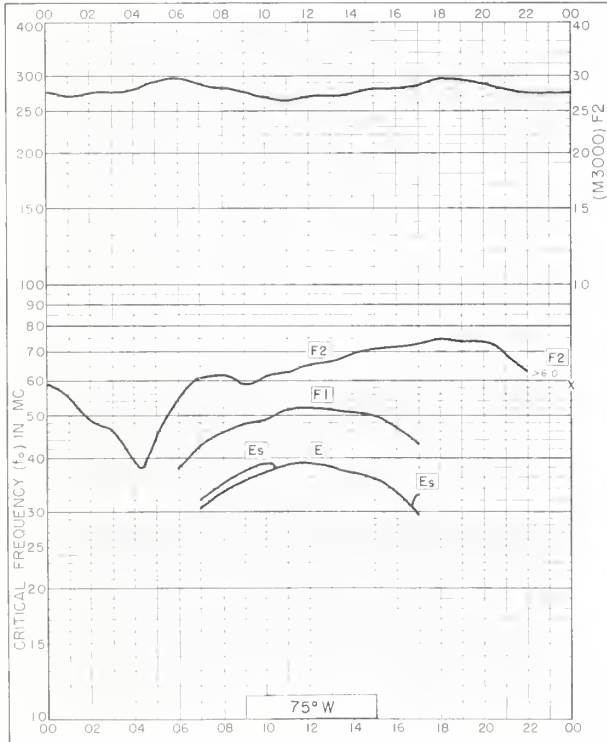


Fig 27. FORT MONMOUTH, NEW JERSEY
 40.4°N , 74.1°W MAY 1960

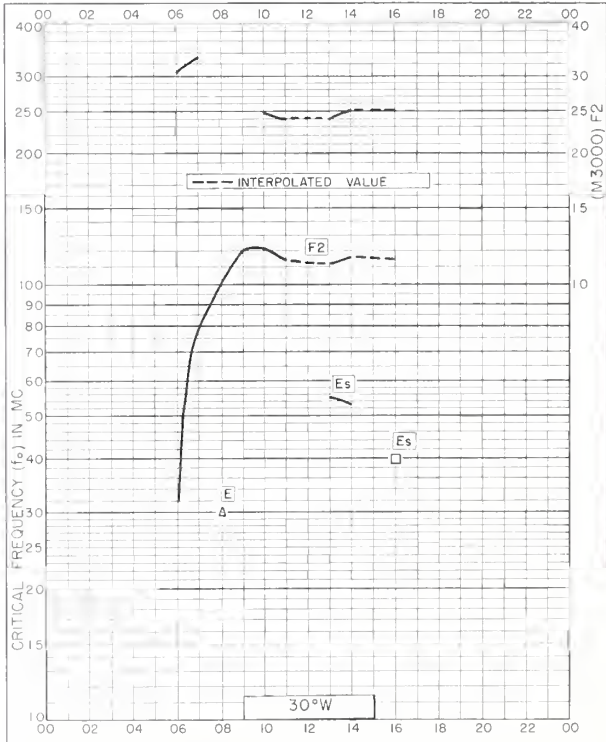


Fig 28. NATAL, BRAZIL
 5.7°S , 35.2°W MAY 1960

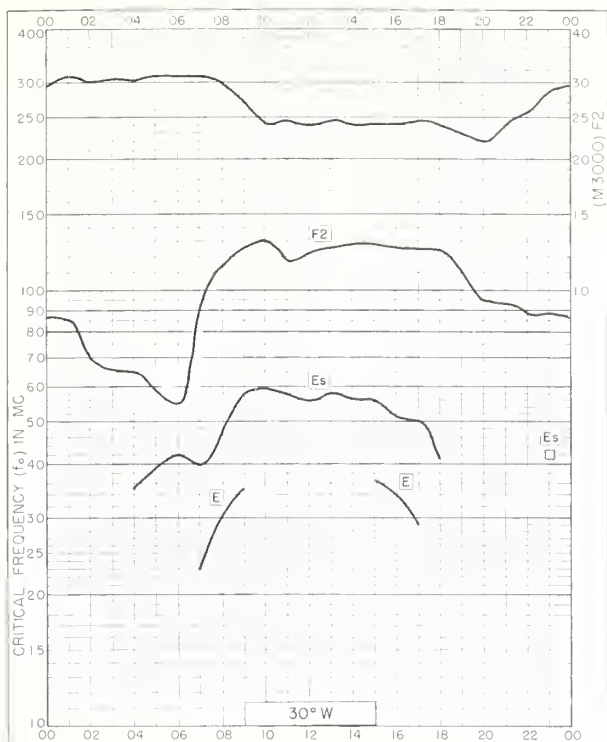


Fig. 29. NATAL, BRAZIL
5.7°S, 35.2°W

APRIL 1960

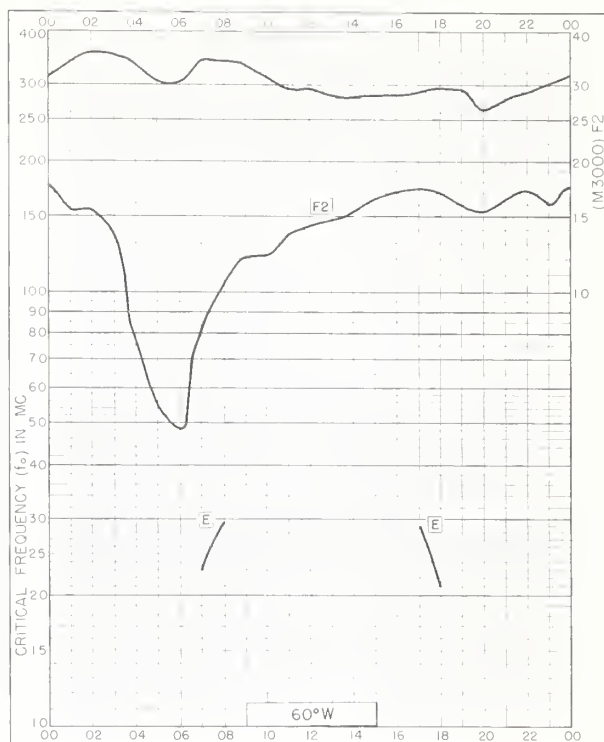


Fig. 30. TUCUMAN, ARGENTINA
26.9°S, 65.4°W

MARCH 1960

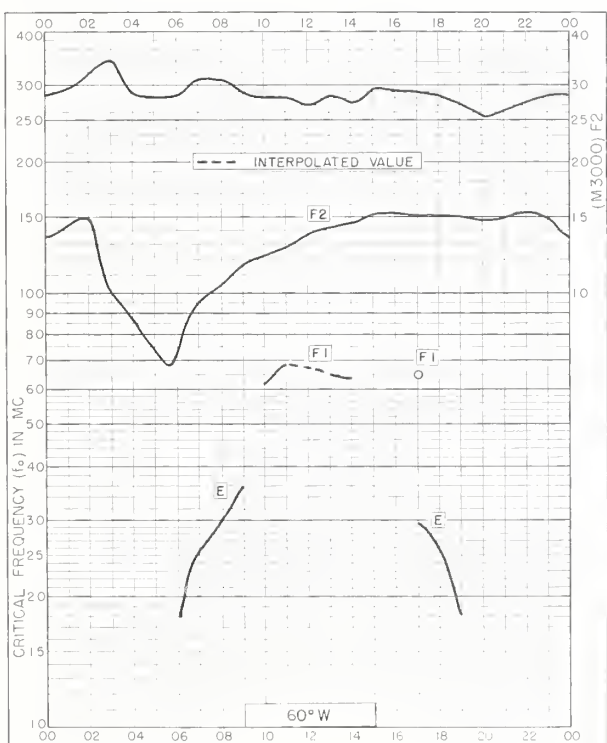


Fig. 31. TUCUMAN, ARGENTINA
26.9°S, 65.4°W

FEBRUARY 1960

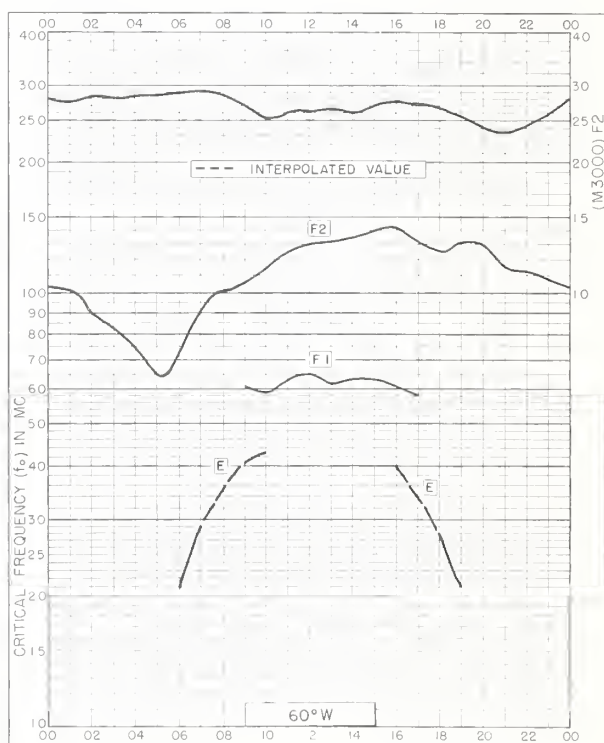


Fig. 32. TUCUMAN, ARGENTINA
26.9°S, 65.4°W

JANUARY 1960

Fig. 33. RESOLUTE BAY, CANADA
74.7°N, 94.9°W NOVEMBER 1959

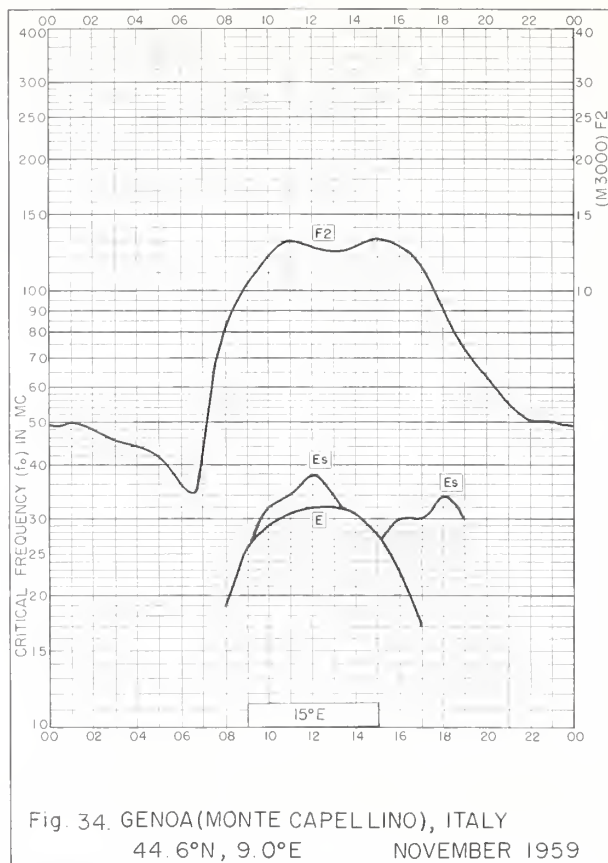


Fig. 34. GENOA(MONTE CAPELLINO), ITALY
44.6°N, 9.0°E NOVEMBER 1959

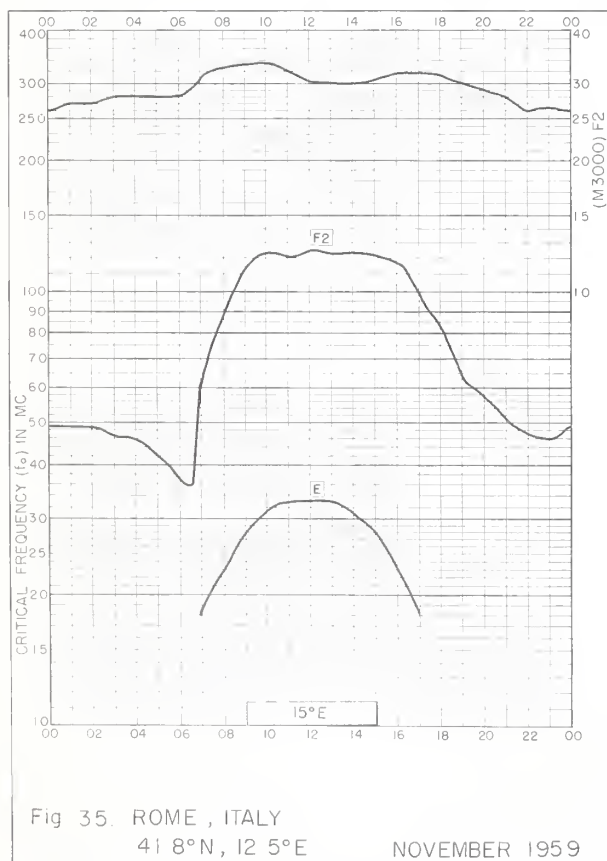


Fig 35. ROME , ITALY
41 8°N, 12 5°E NOVEMBER 1959

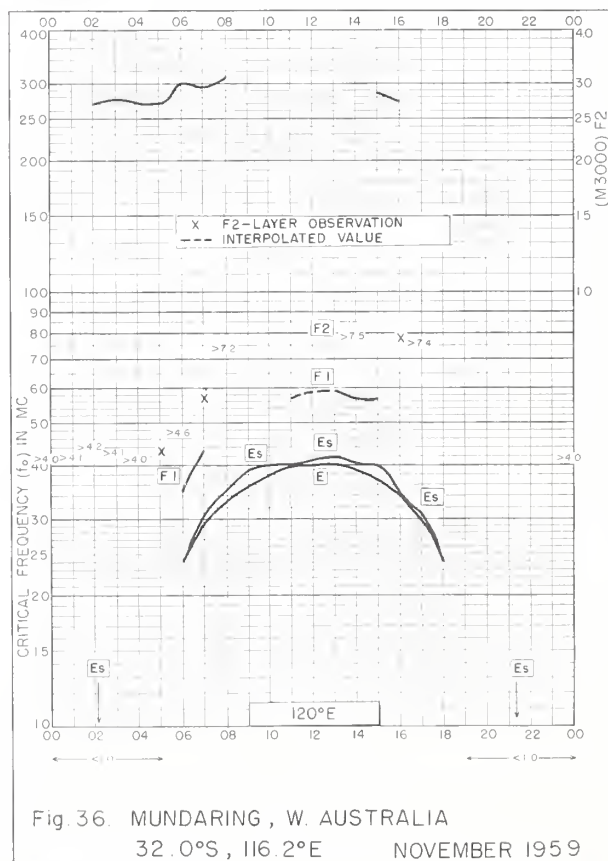


Fig. 36. MUNDARING, W. AUSTRALIA
32.0°S, 116.2°E NOVEMBER 1959

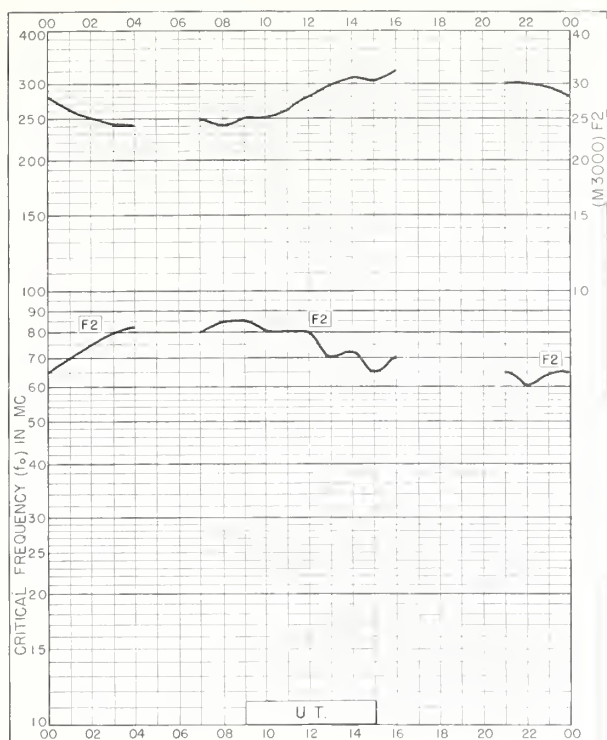


Fig 37. MAWSON
67.6°S, 62.9°E
NOVEMBER 1959

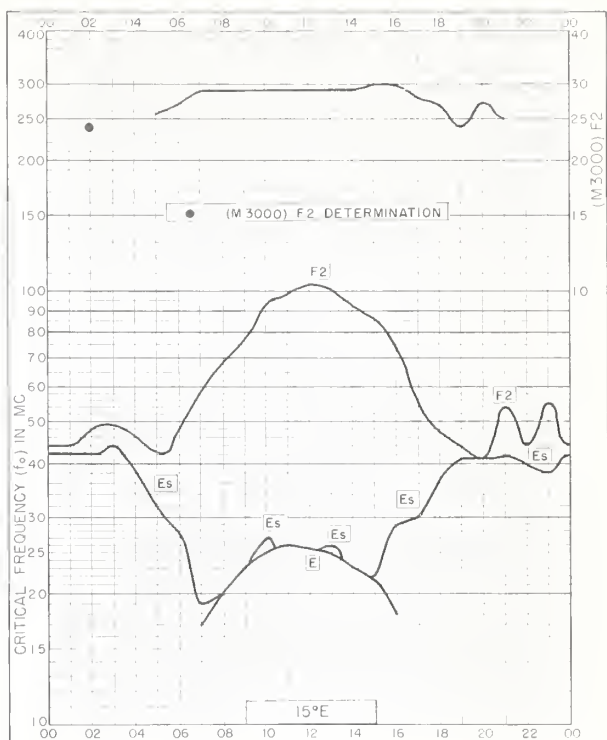


Fig 38. TROMSØ, NORWAY
69.7°N, 19.0°E
OCTOBER 1959

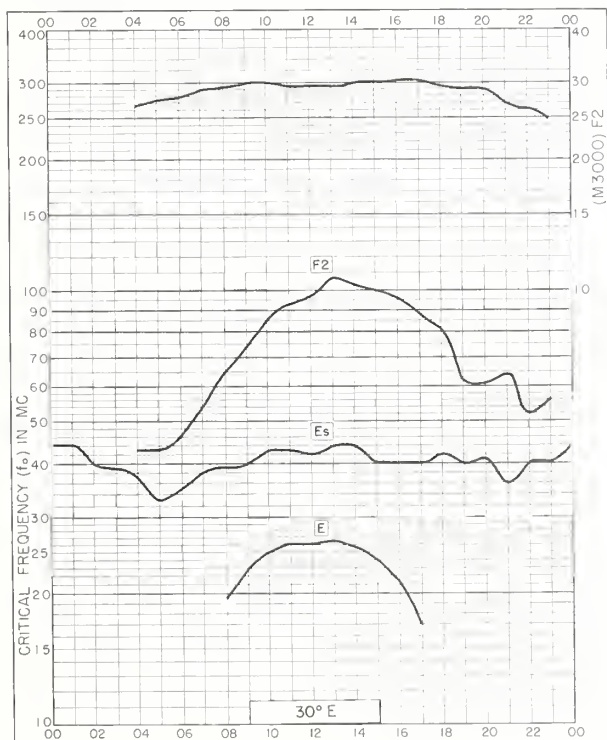


Fig 39. SODANKYLÄ, FINLAND
67.4°N, 26.6°E
OCTOBER 1959

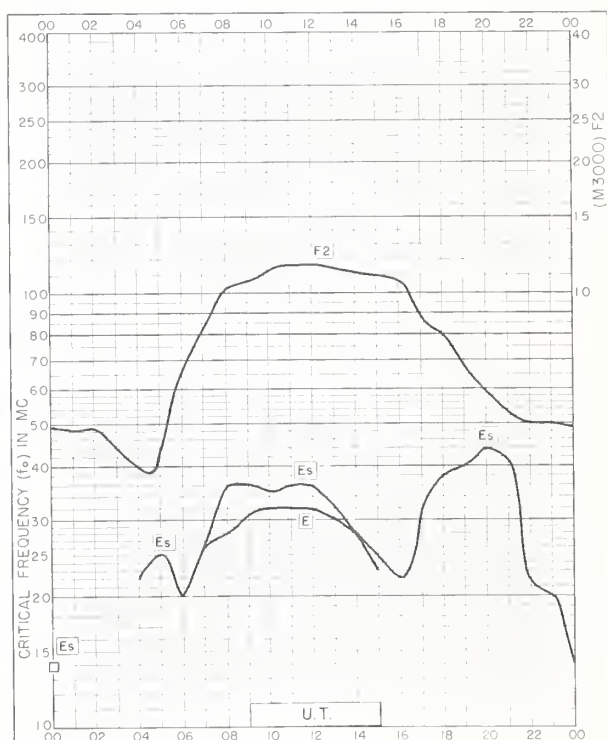


Fig 40. PRUHONICE, CZECHOSLOVAKIA
50.0°N, 14.6°E
OCTOBER 1959

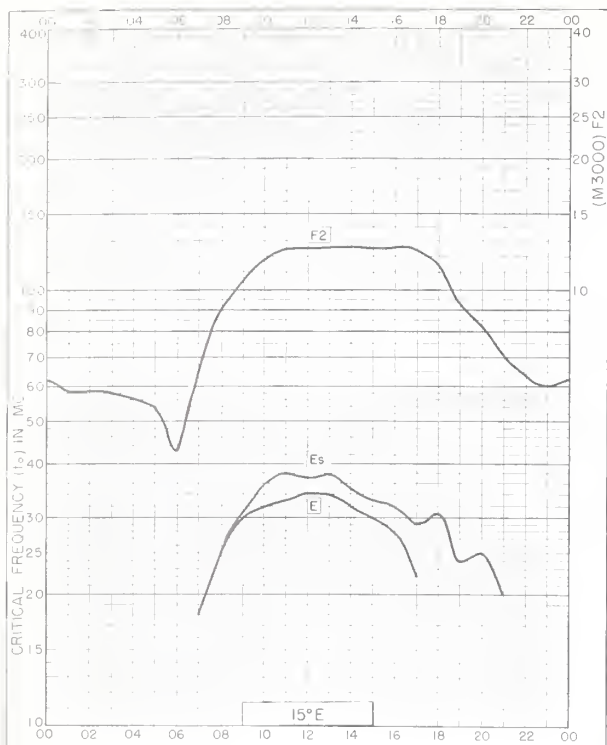


Fig. 41. GENOA (MONTE CAPELLINO), ITALY
44.6°N, 9.0°E
OCTOBER 1959

NBS 504

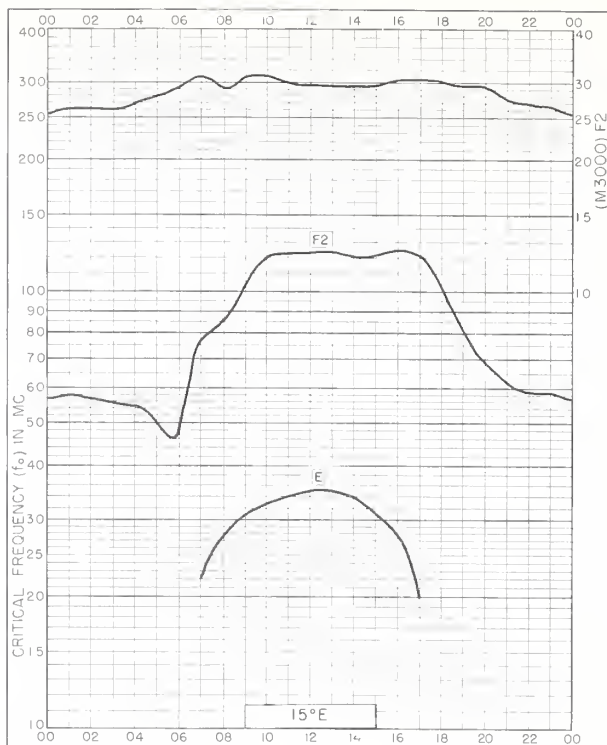


Fig. 42. ROME, ITALY
41.8°N, 12.5°E
OCTOBER 1959

NBS 503

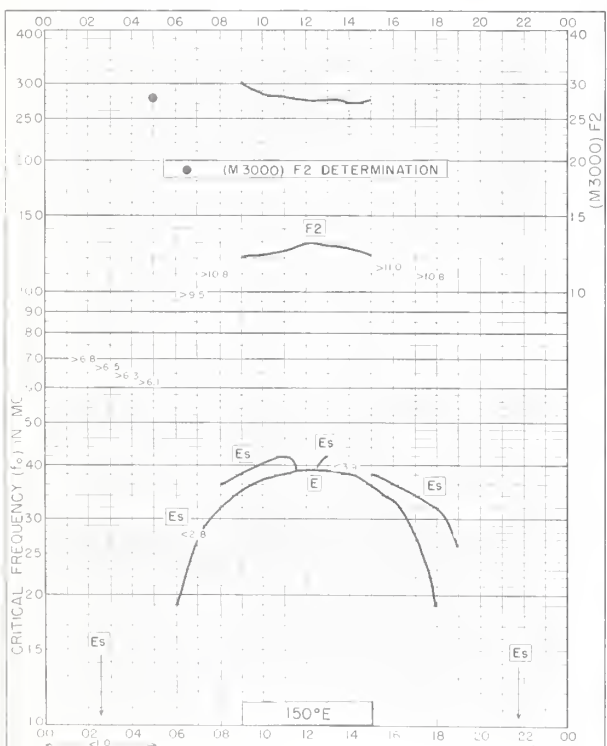


Fig. 43. TOWNSVILLE, AUSTRALIA
19.3°S, 146.7°E
OCTOBER 1959

NBS 504

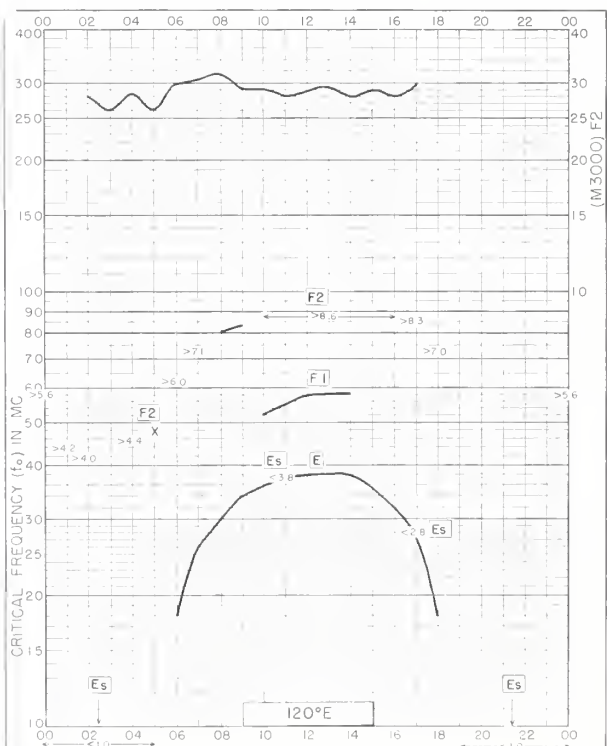


Fig. 44. MUNDARING, W. AUSTRALIA
32.0°S, 116.2°E
OCTOBER 1959

NBS 503

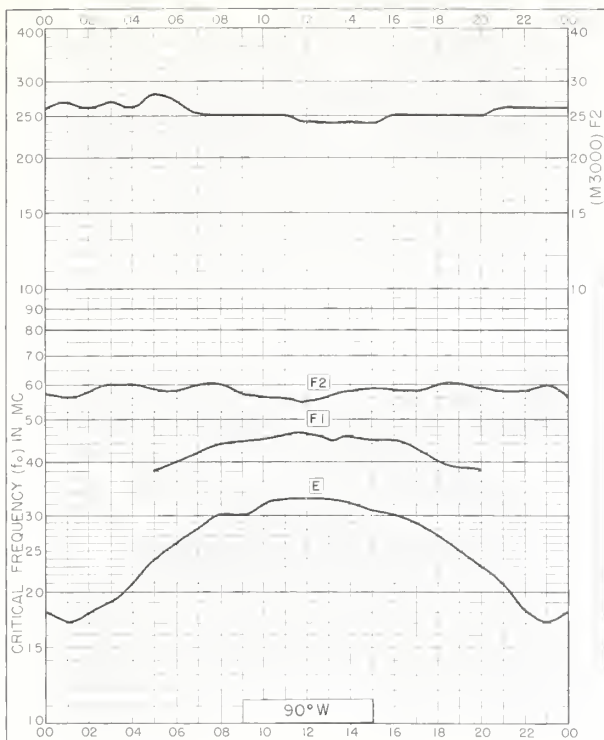


Fig. 45. RESOLUTE BAY, CANADA
74.7°N, 94.9°W
AUGUST 1959

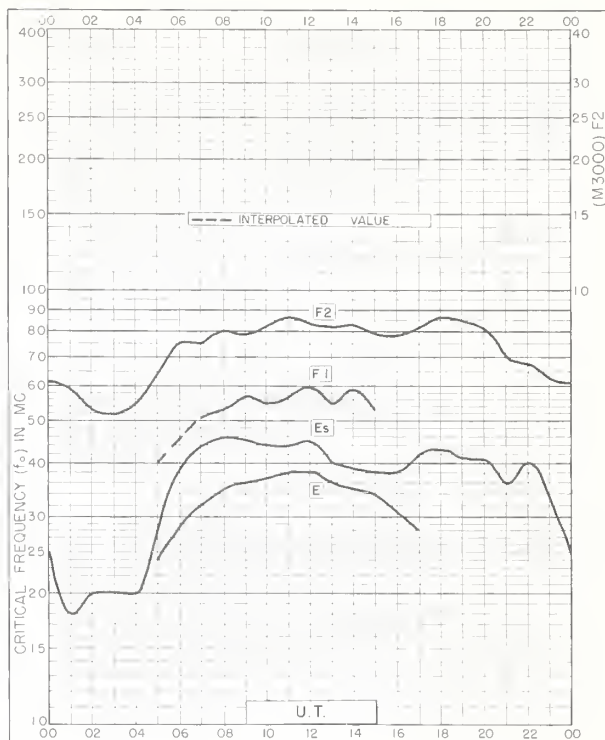


Fig. 46. PRUHONICE, CZECHOSLOVAKIA
50.0°N, 14.6°E
AUGUST 1959

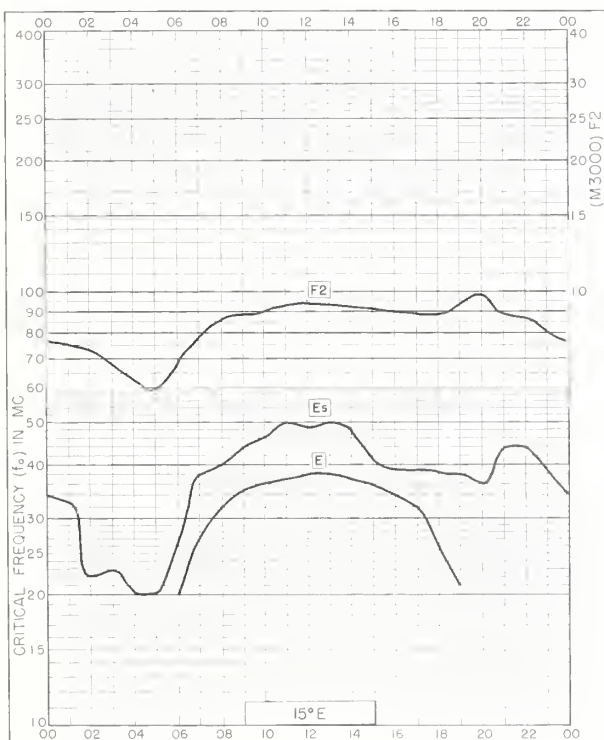


Fig. 47. GENOA (MONTE CAPELLINO), ITALY
44.6°N, 9.0°E
AUGUST 1959

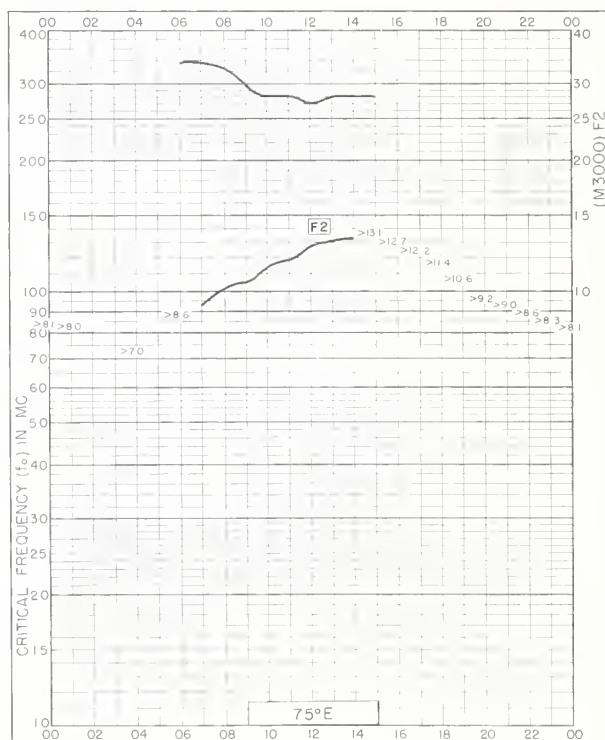


Fig. 48. DELHI, INDIA
28.6°N, 77.2°E
AUGUST 1959

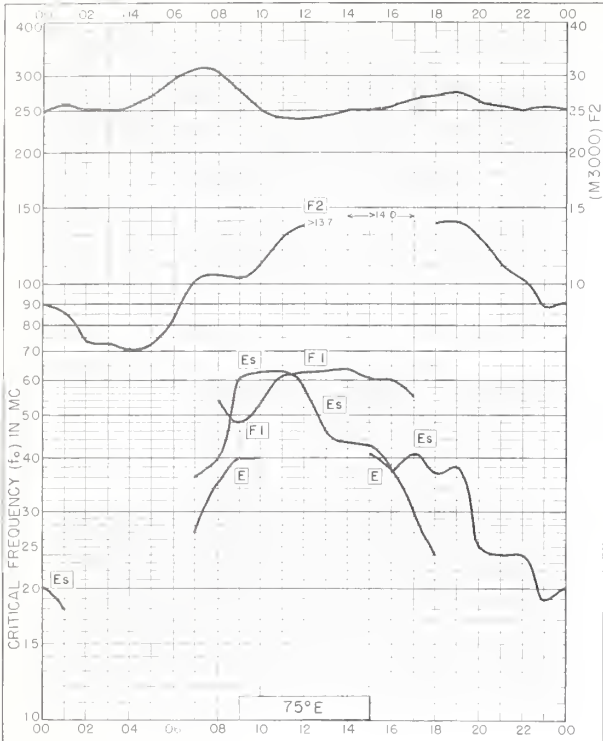


Fig 49. AHMEDABAD , INDIA
23.0°N, 72.6°E
AUGUST 1959

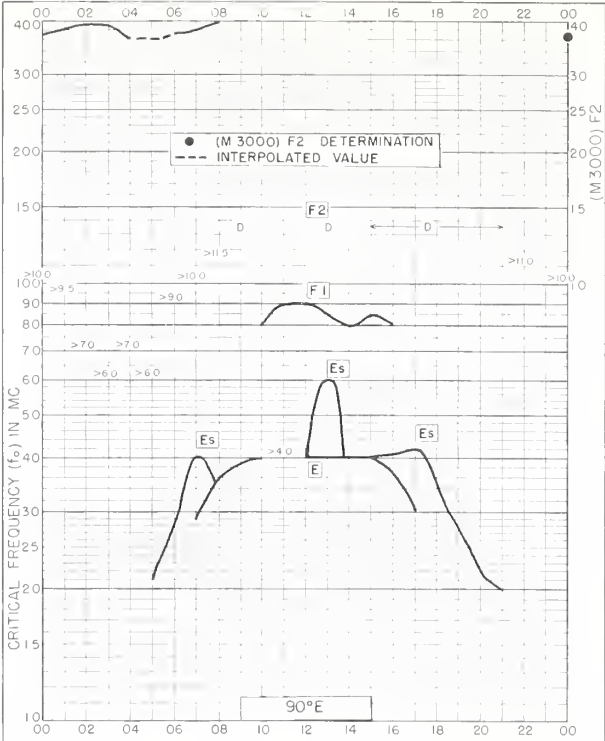


Fig 50. CALCUTTA , INDIA
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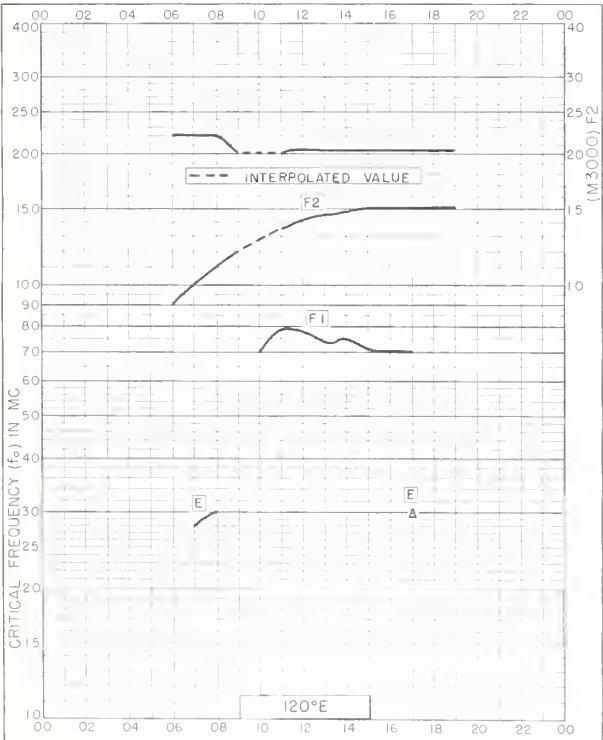


Fig 51. MACAU
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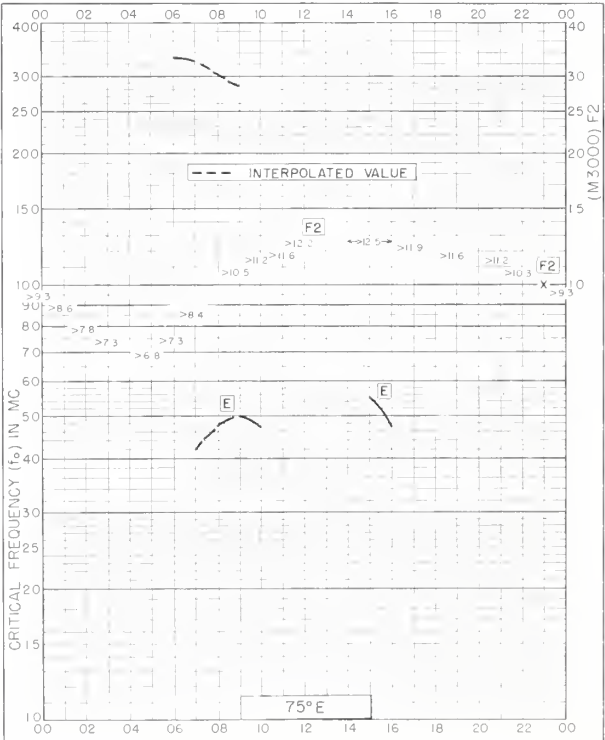


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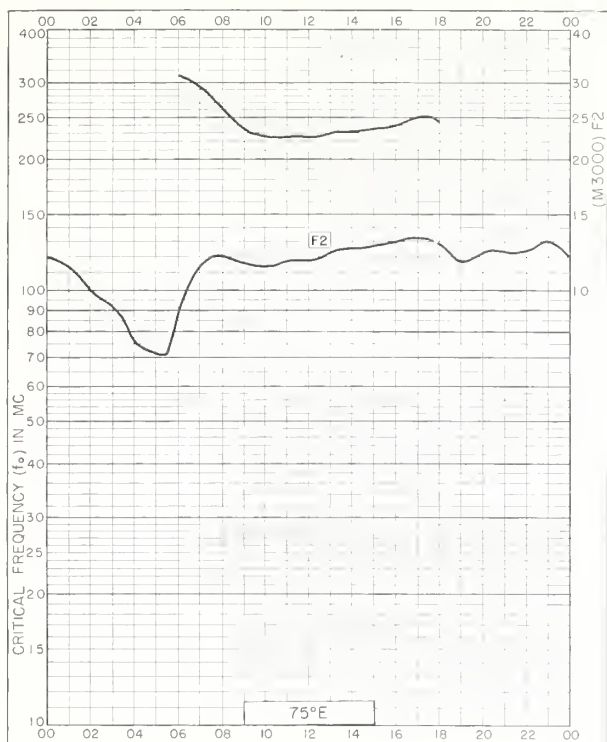


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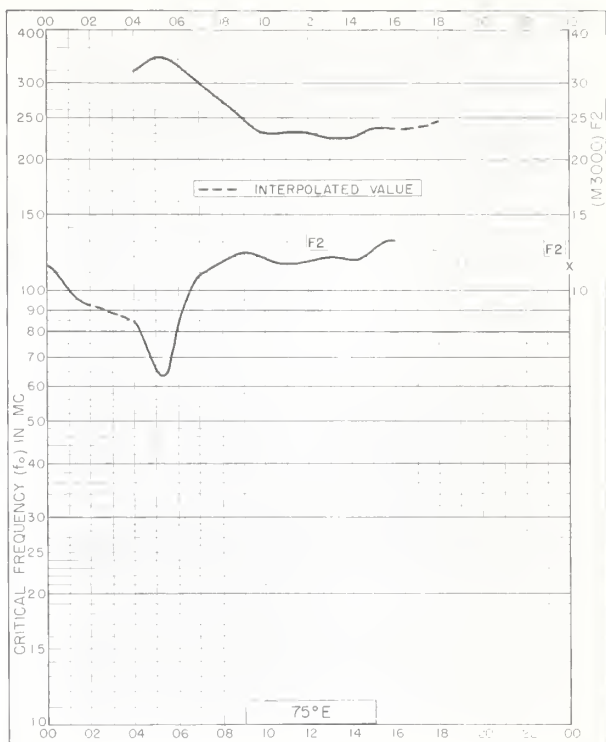


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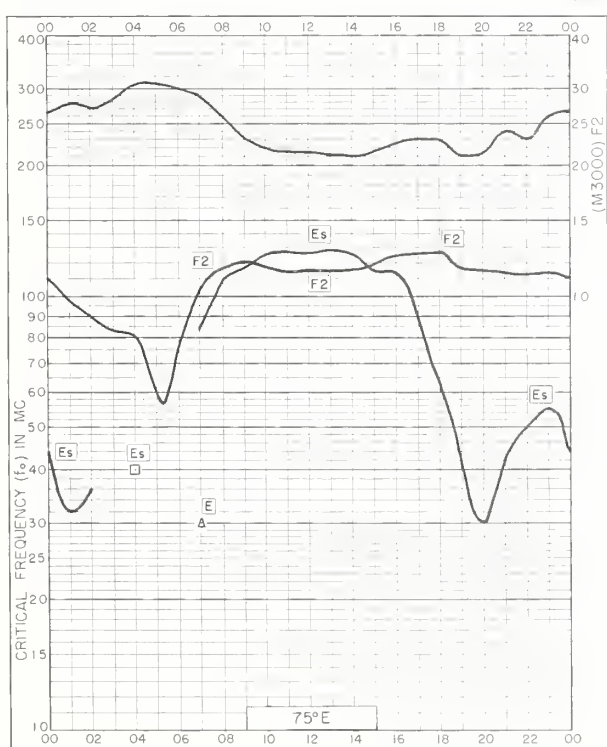


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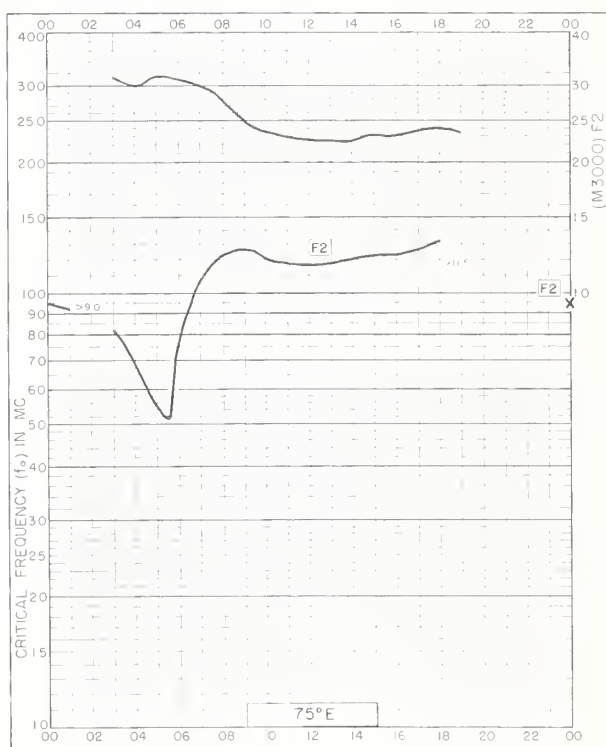


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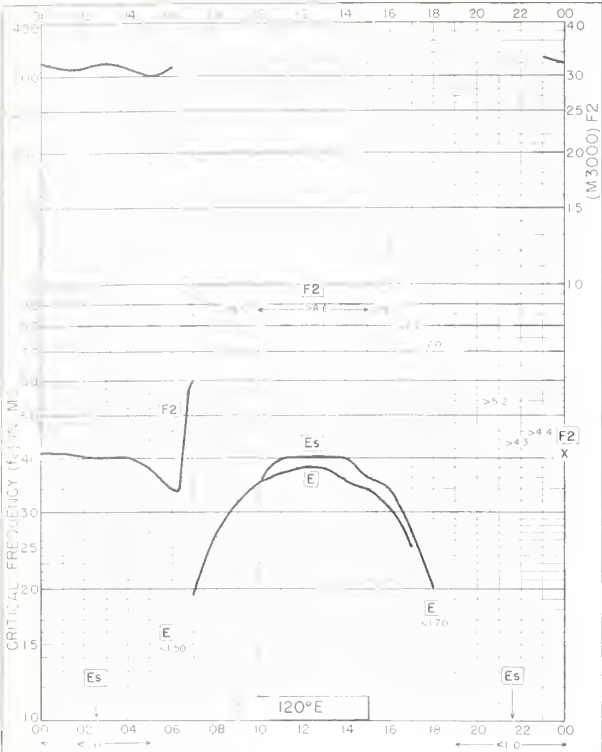


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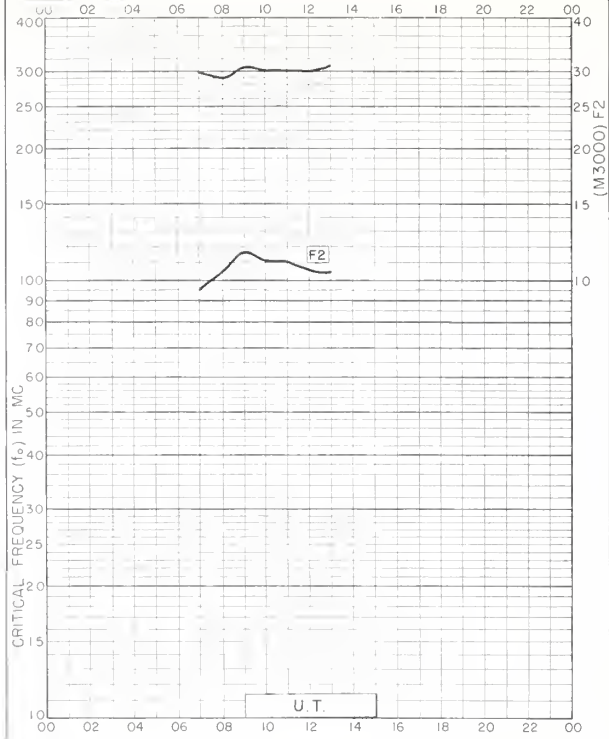


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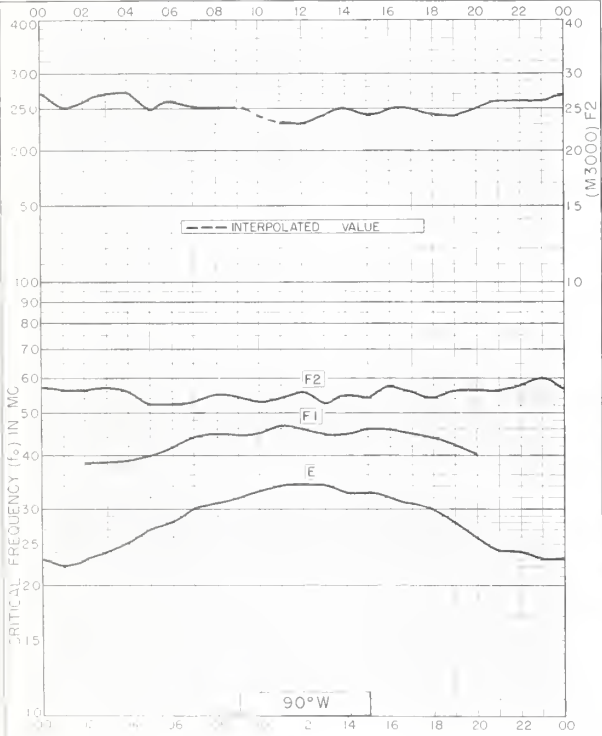


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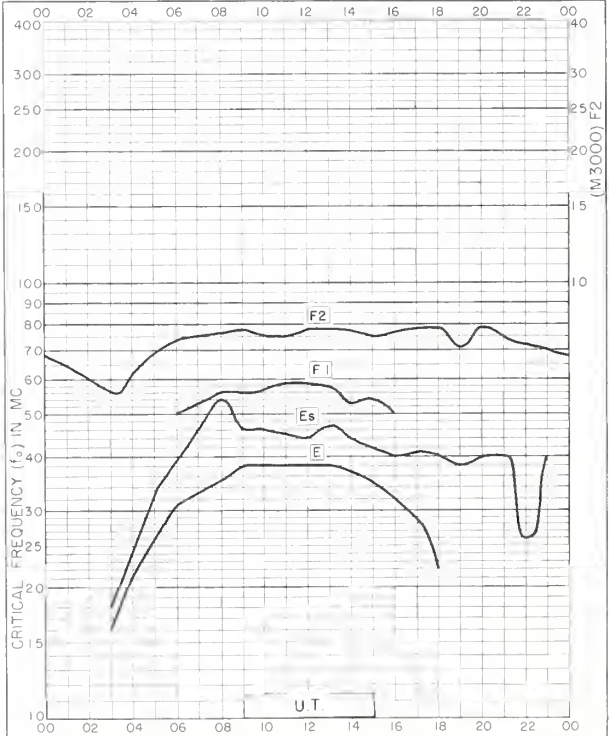


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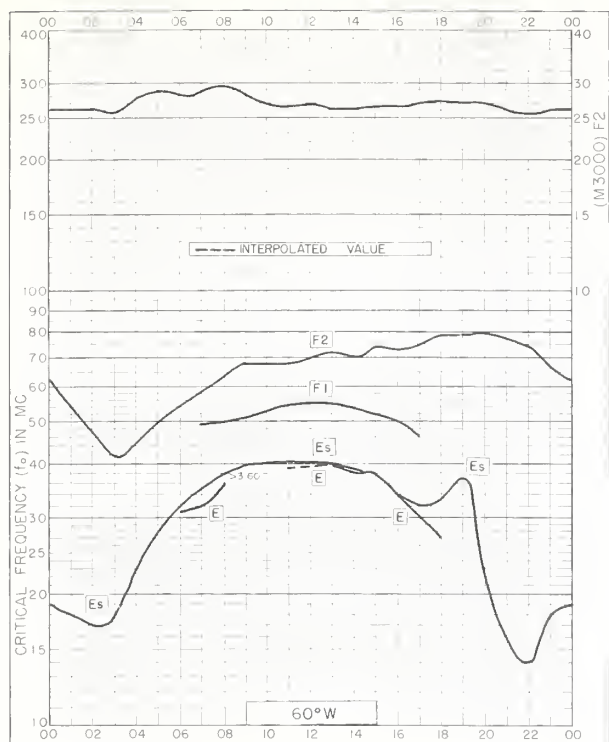


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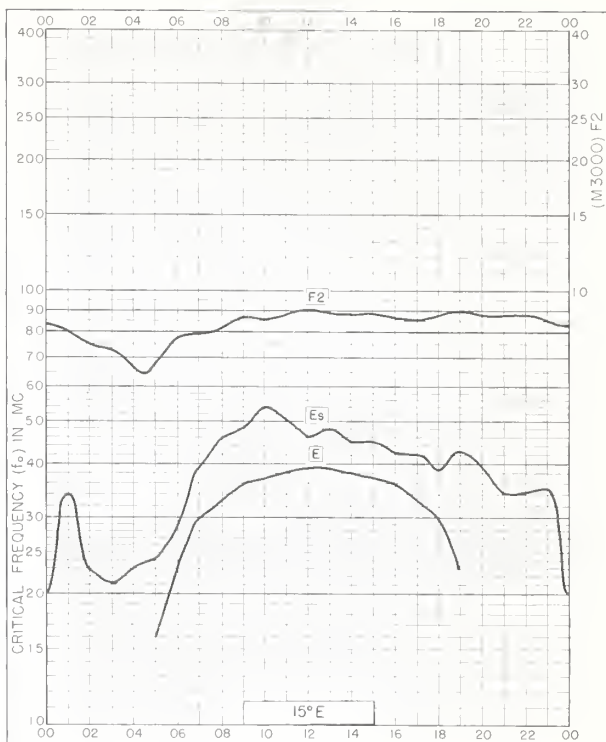


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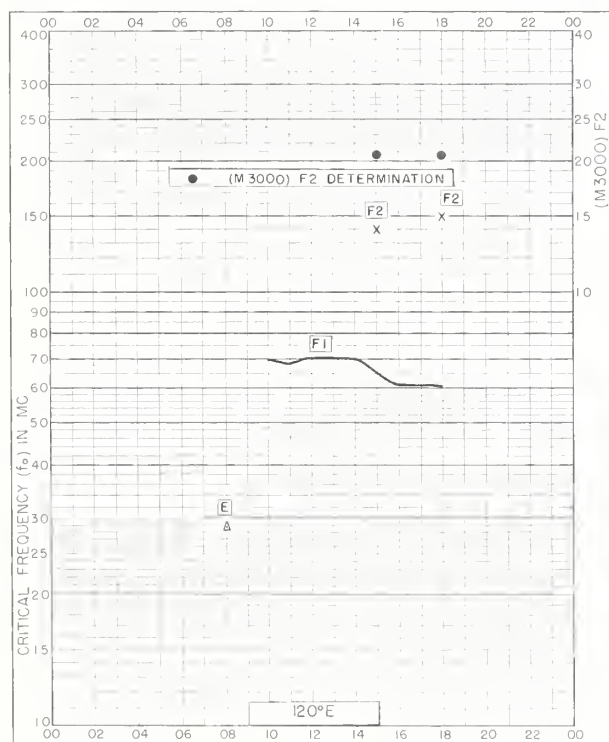


Fig. 63. MACAU
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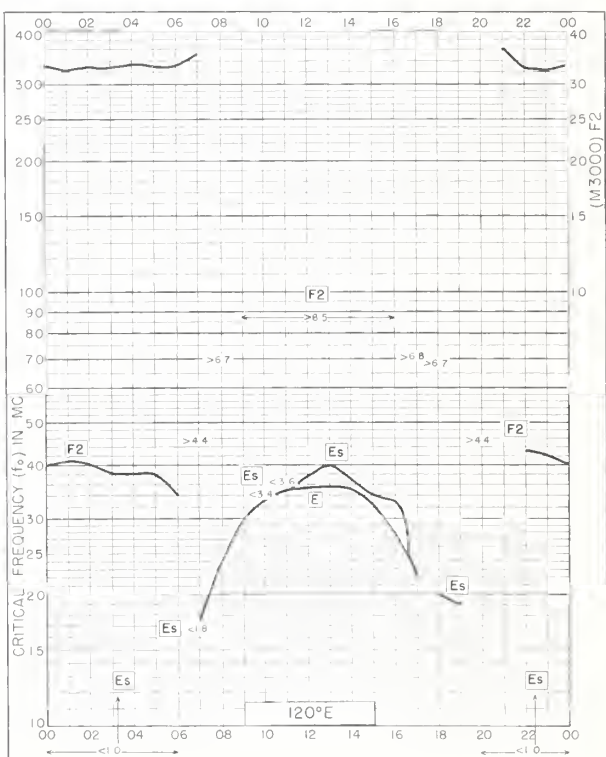
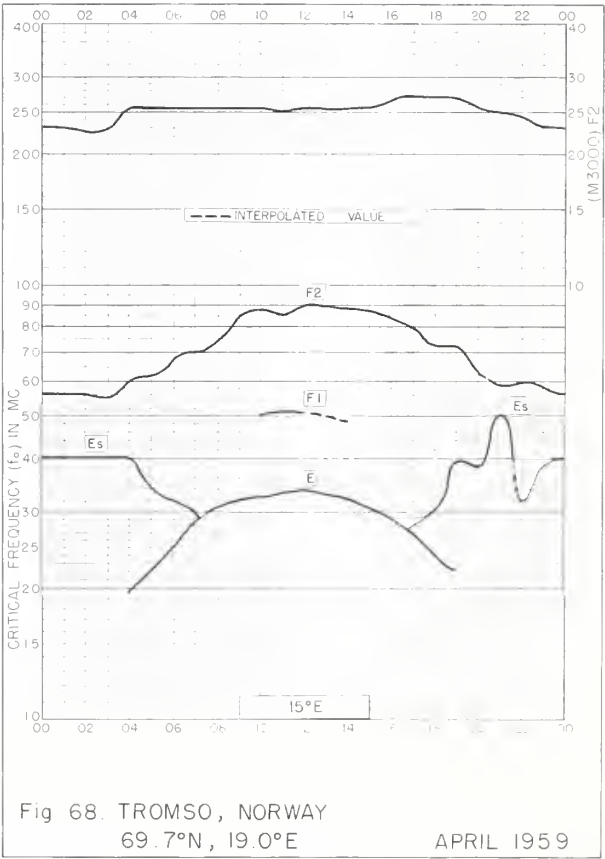
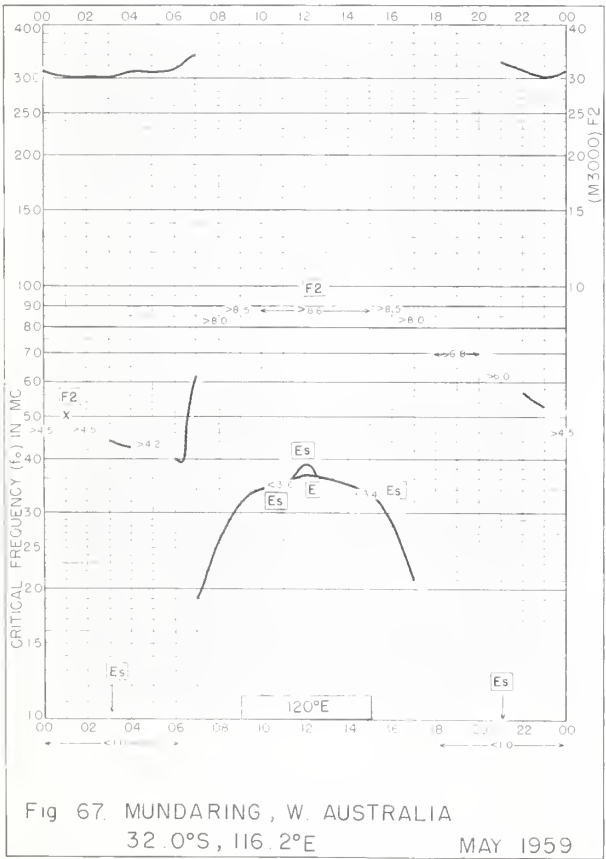
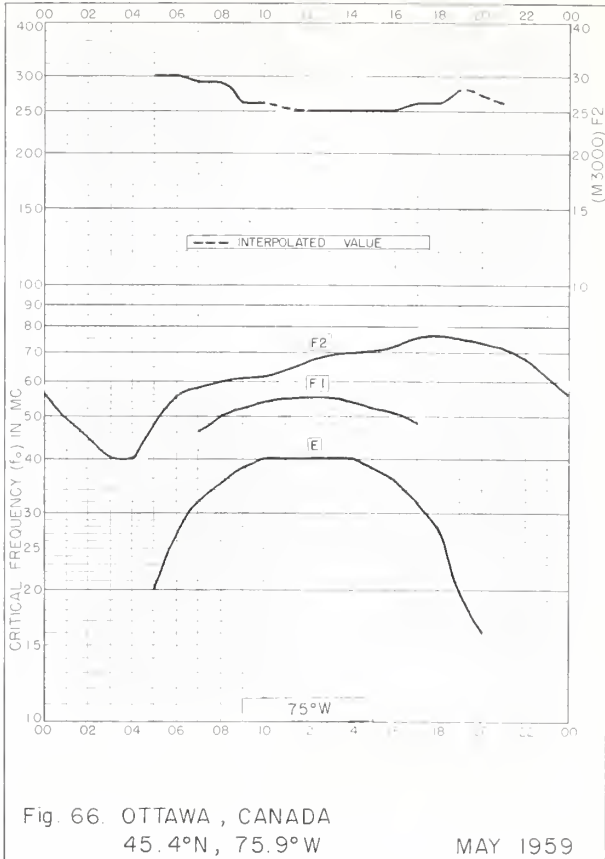
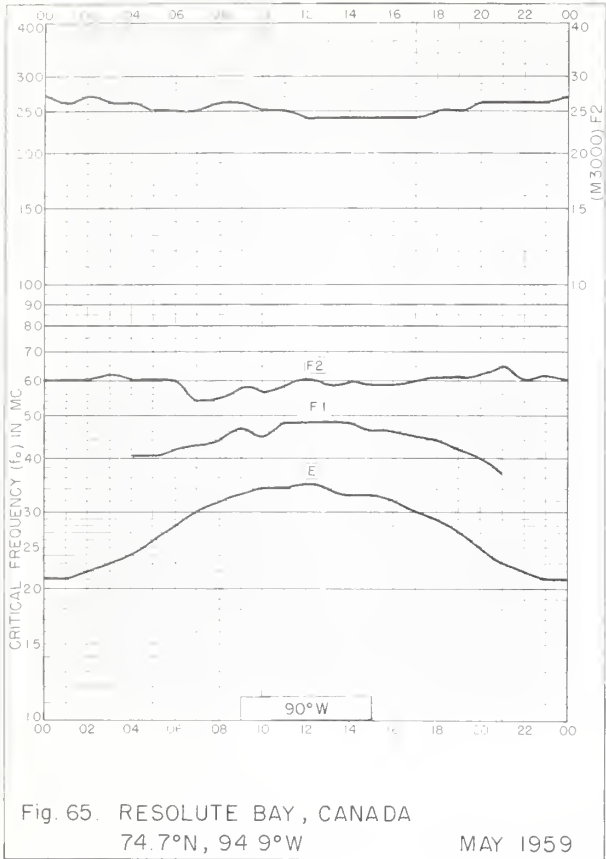


Fig. 64. MUNDARING, W AUSTRALIA
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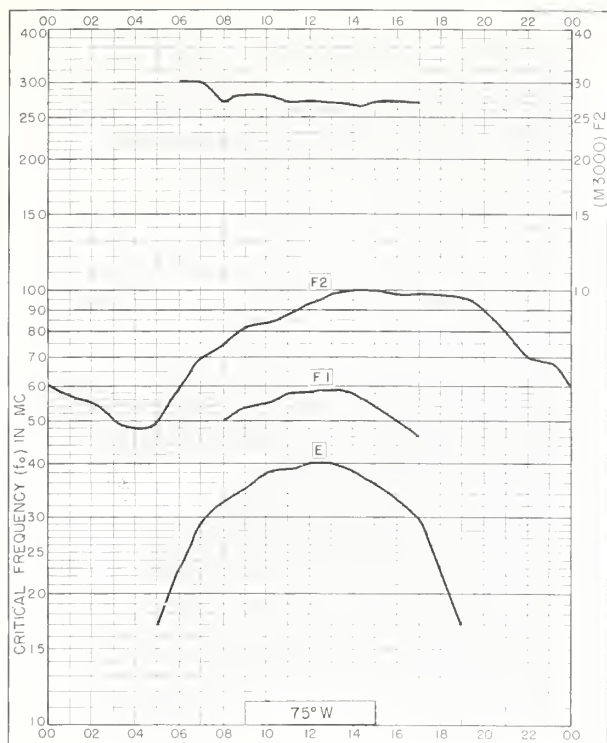


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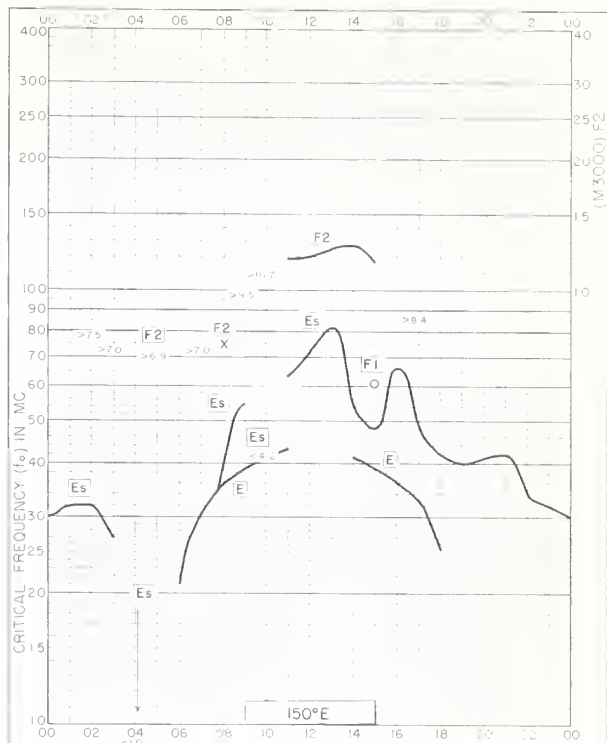


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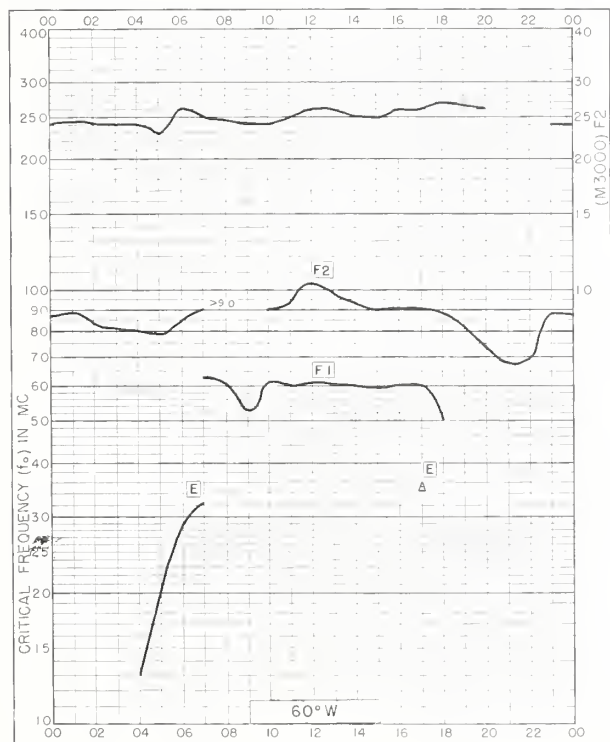


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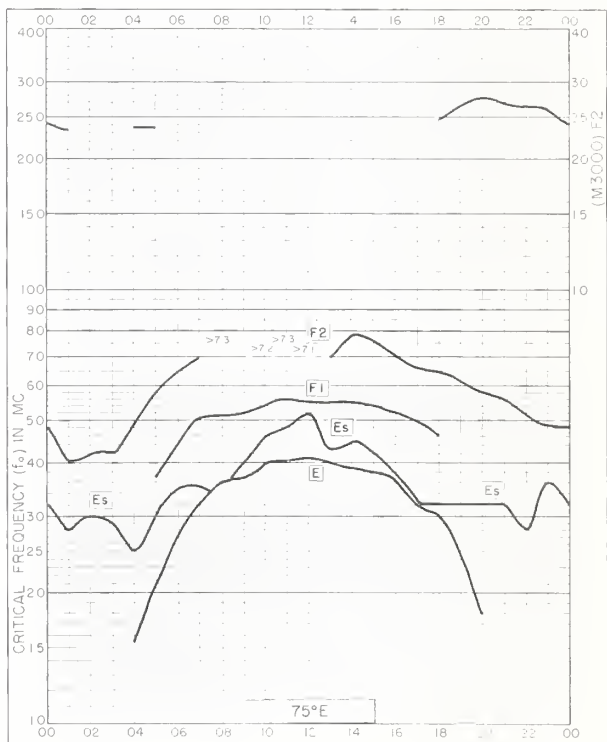


Fig. 72. KERGUELEN I.
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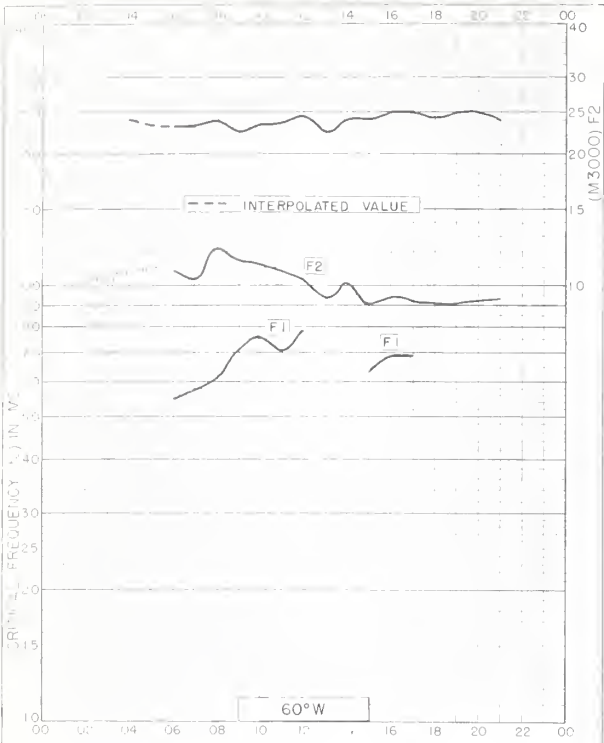


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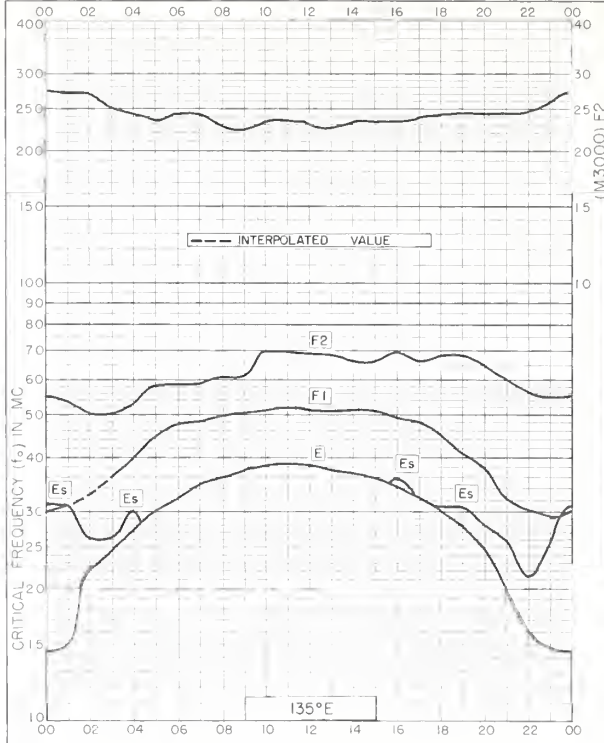


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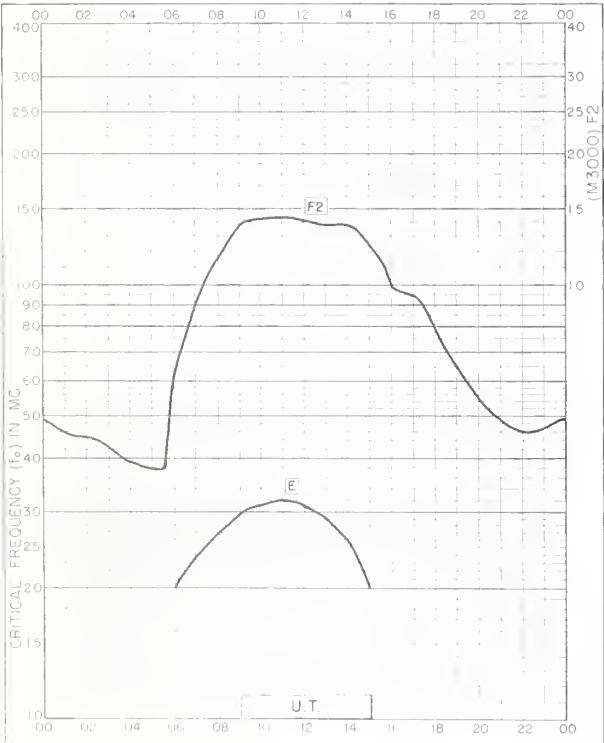


Fig. 75. PRUHONICE, CZECHOSLOVAKIA
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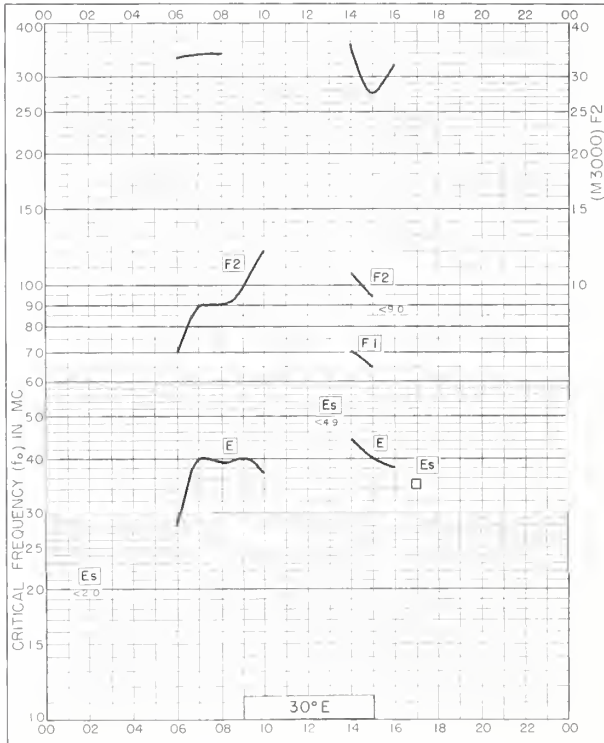
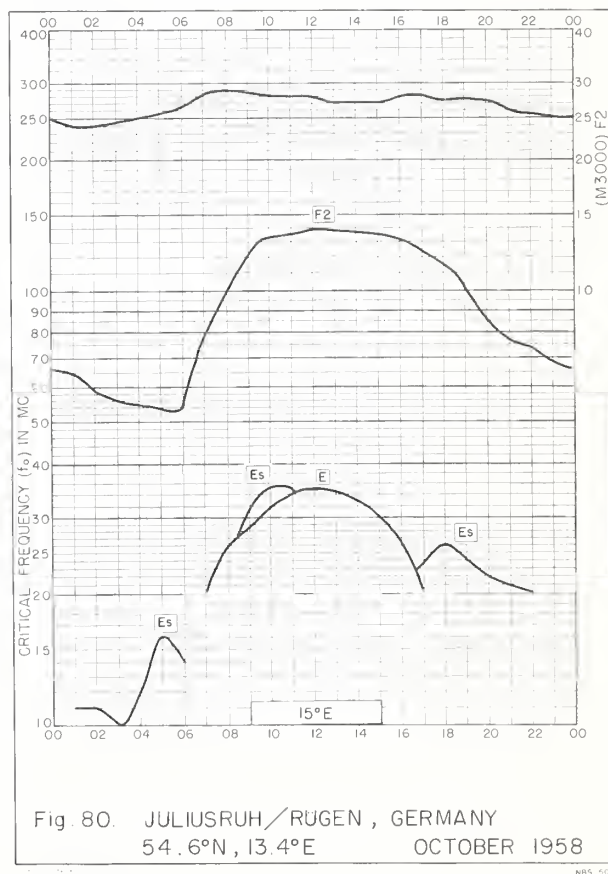
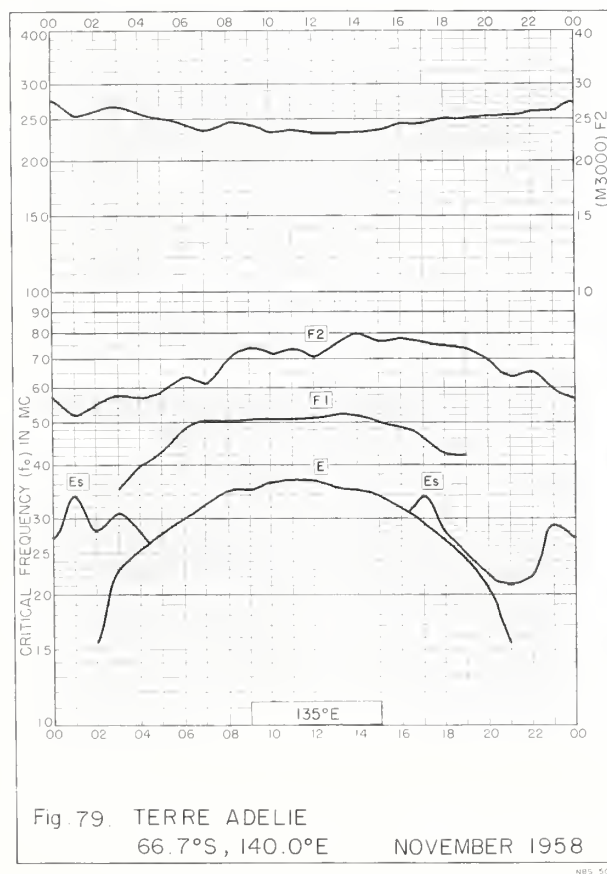
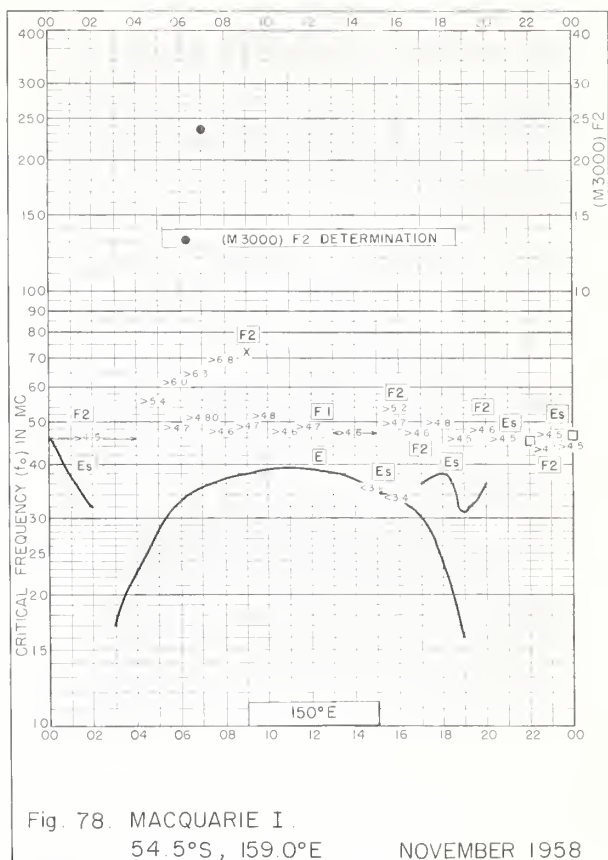
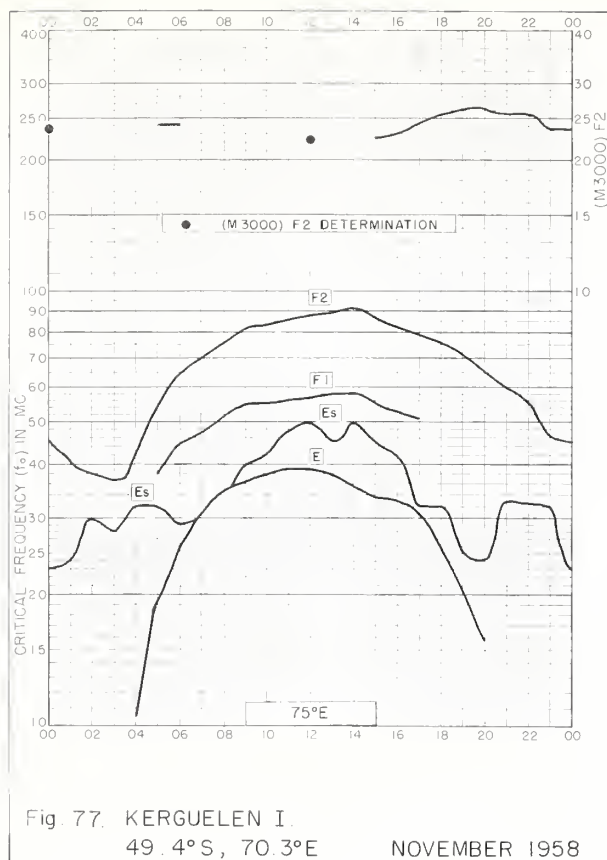


Fig. 76. SALISBURY, SOUTHERN RHODESIA
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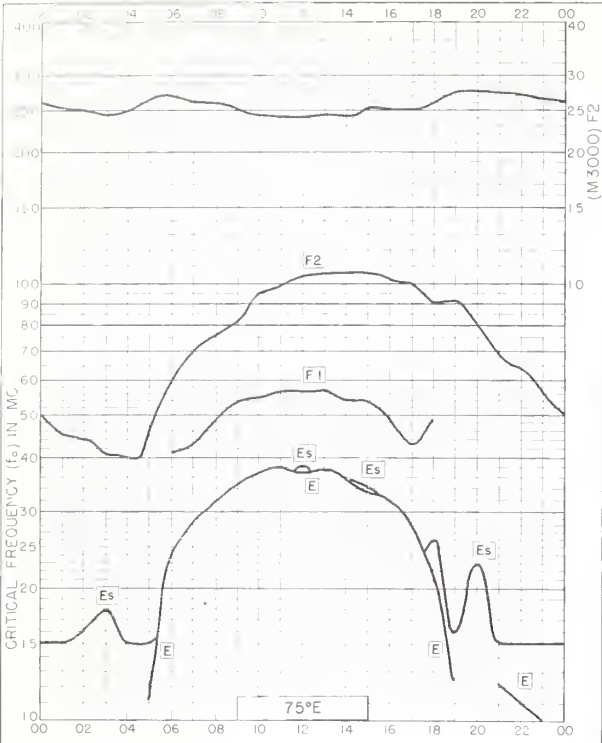


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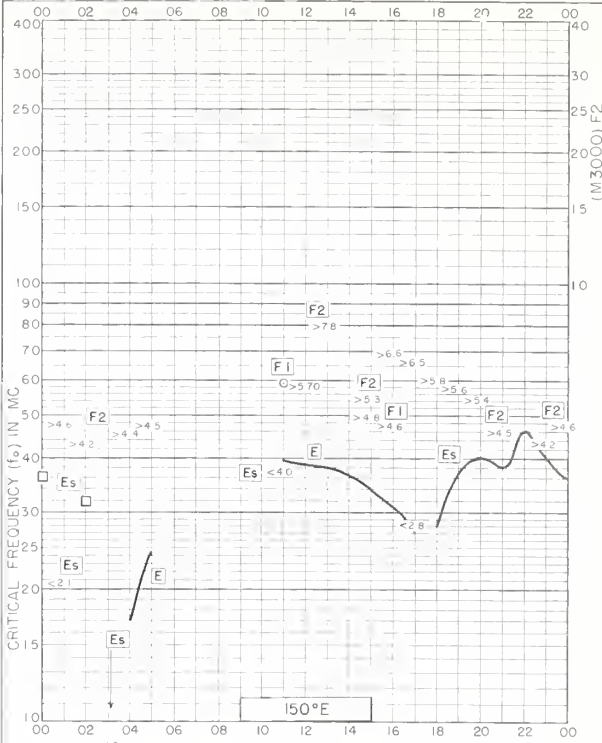


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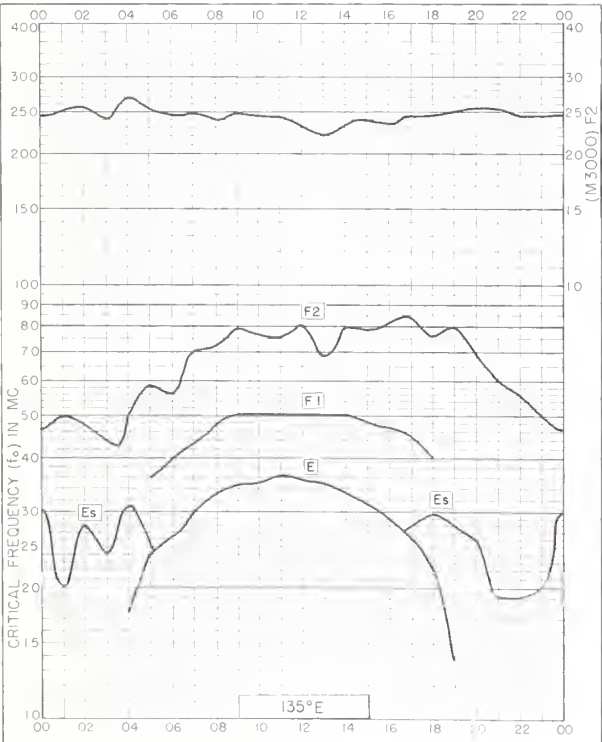


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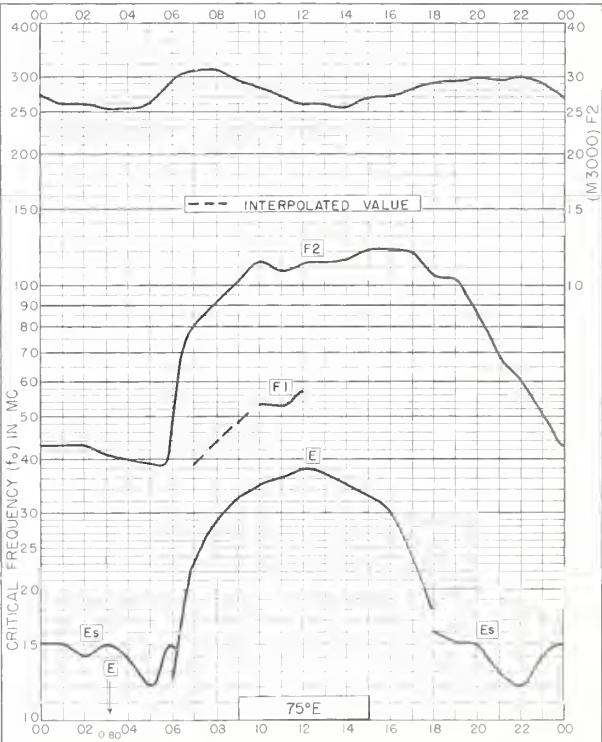


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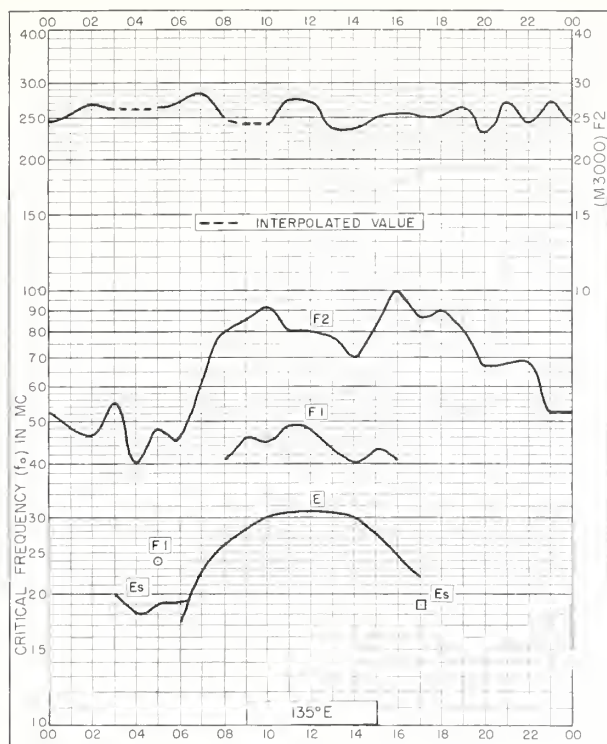


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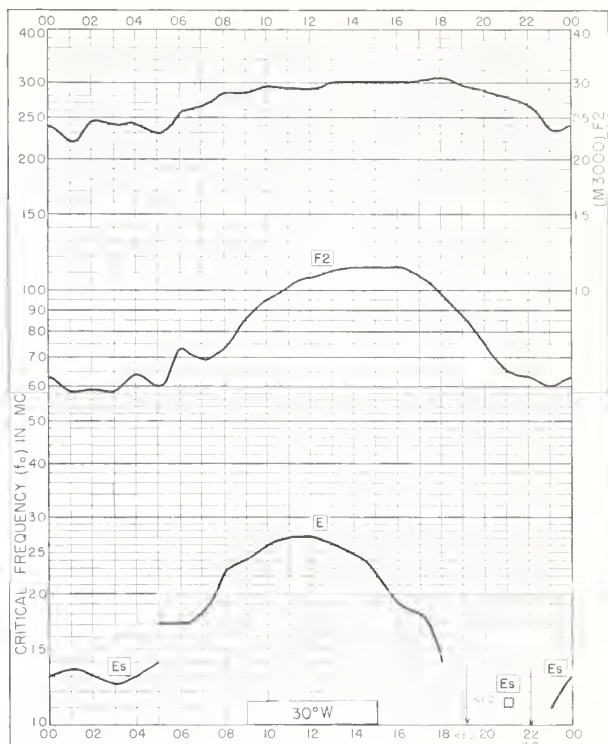


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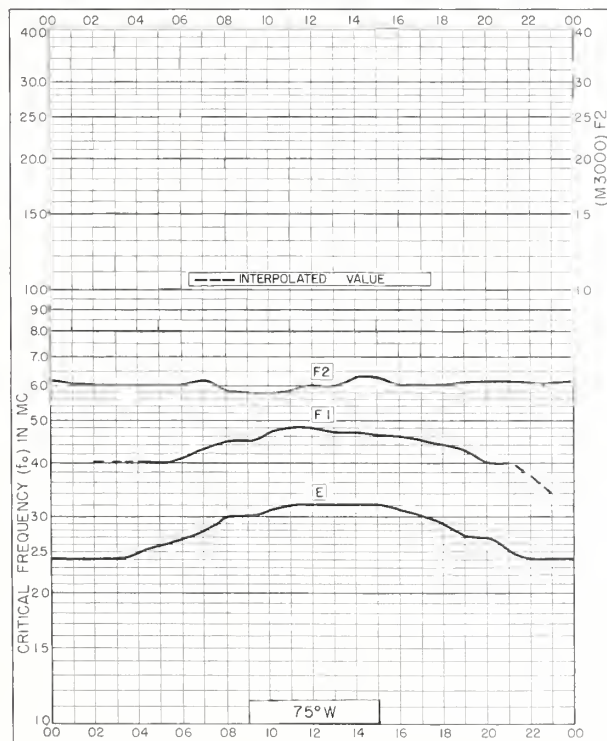


Fig. 87. EUREKA, CANADA
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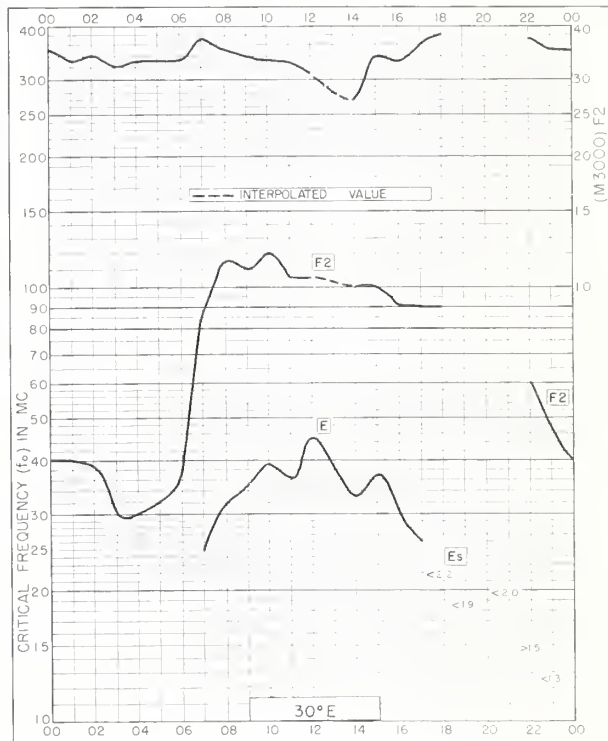


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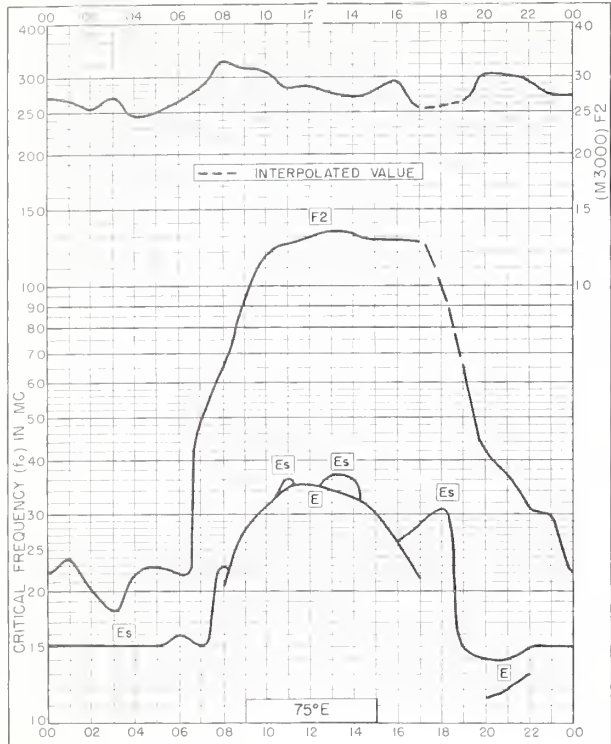


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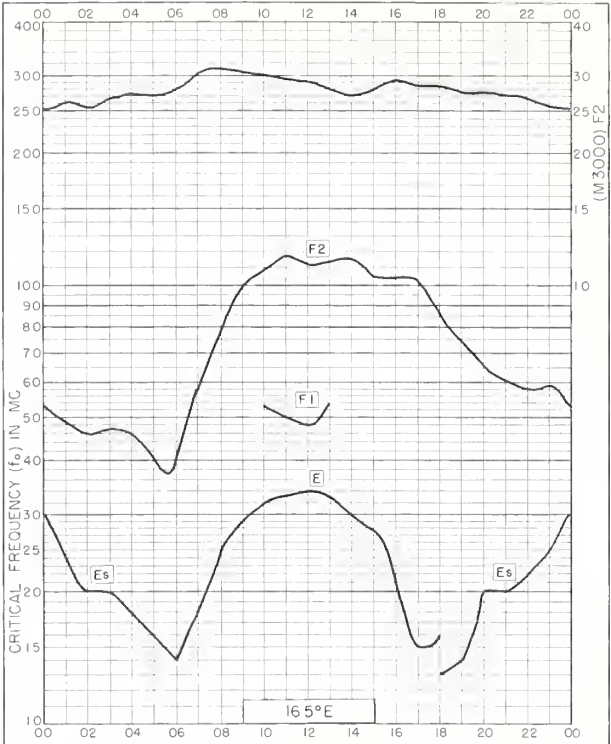


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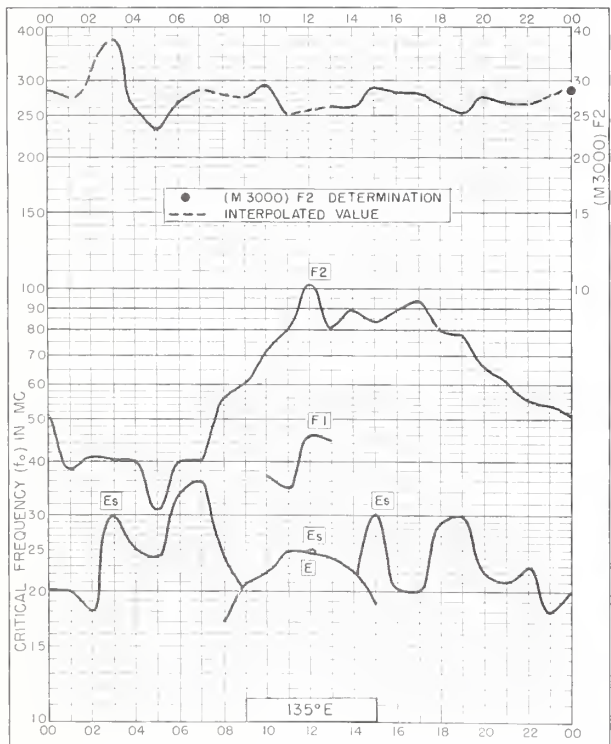


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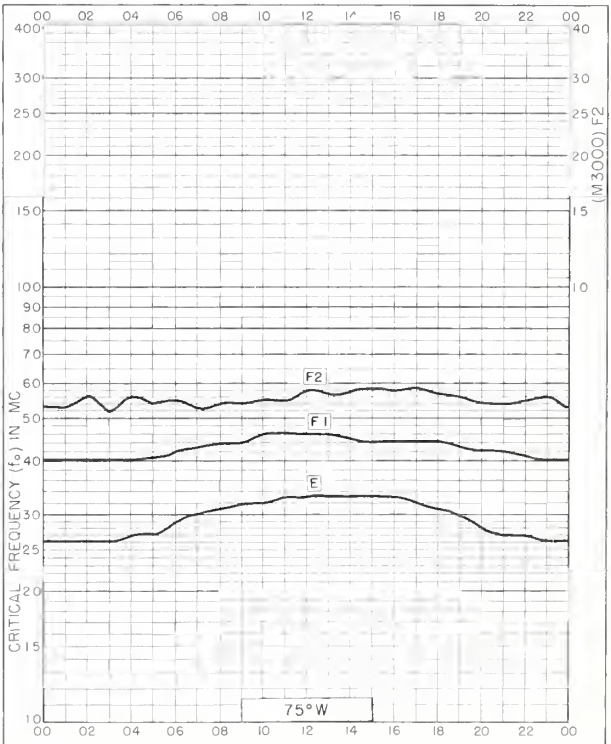


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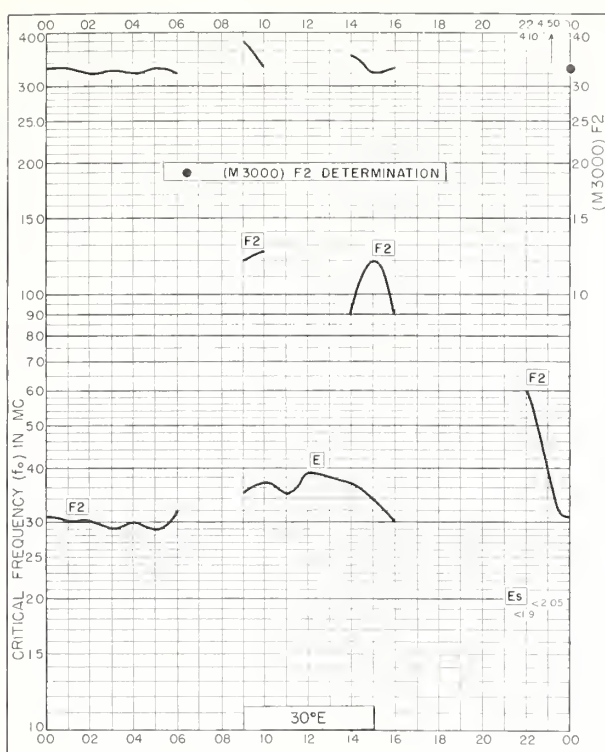


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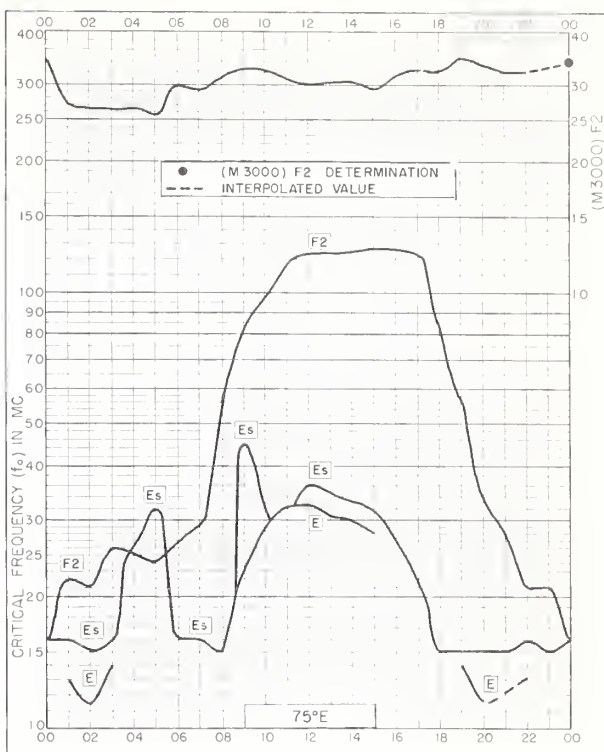


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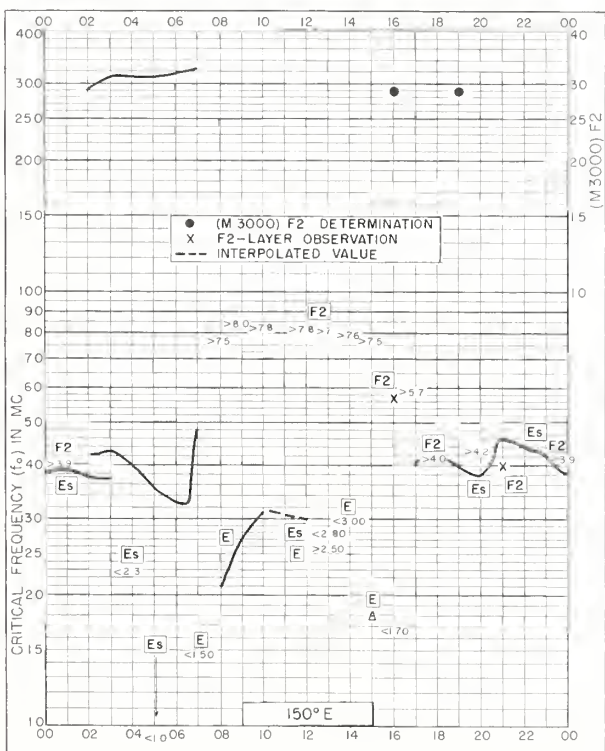
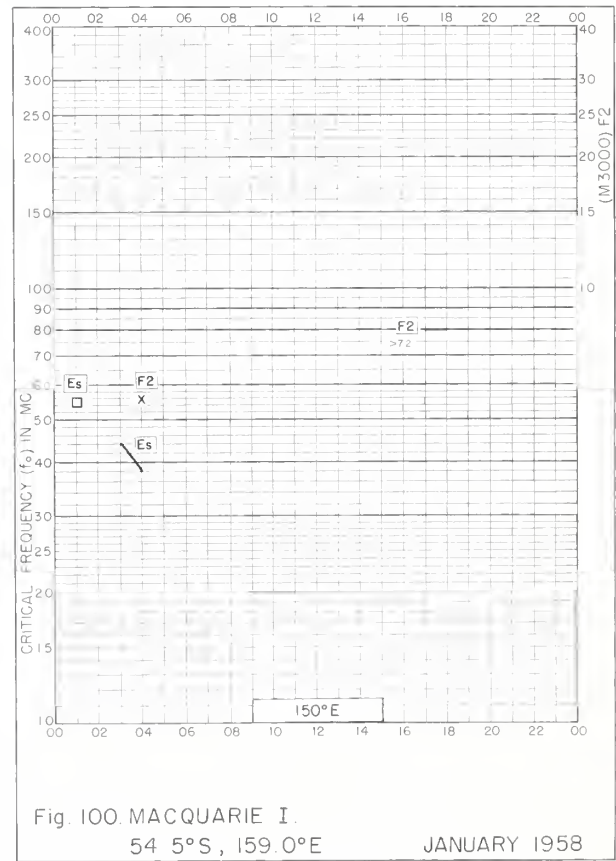
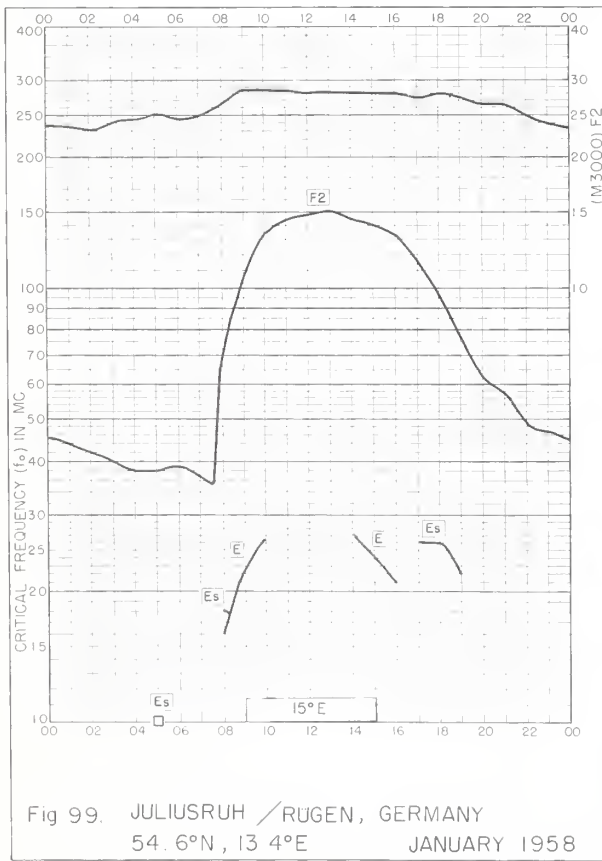
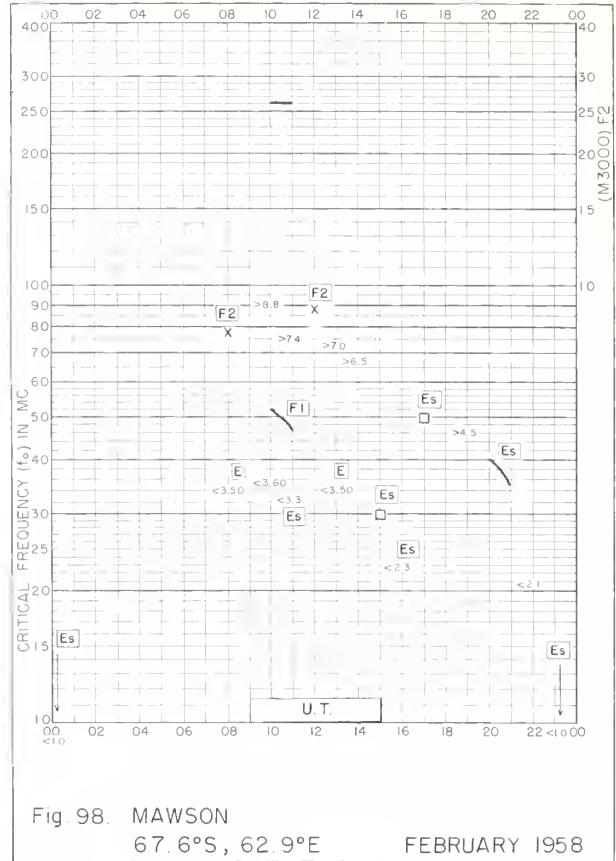
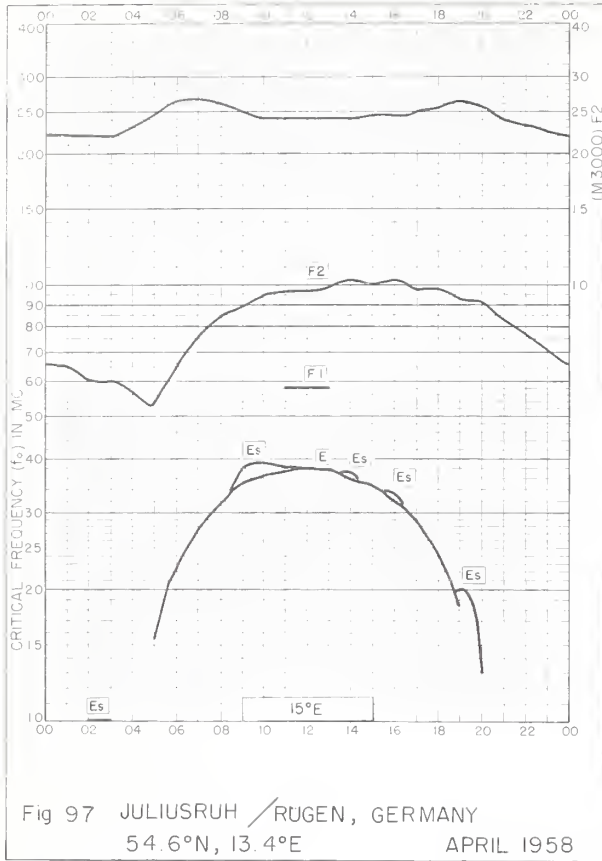


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Telephoned and telegraphed reports of ionospheric, solar, geomagnetic, and radio propagation data.

Weekly:

CRPL—J. North Atlantic Radio Propagation Forecast.
CRPL—Jp. North Pacific Radio Propagation Forecast.

Semimonthly:

CRPL—Ja. Semimonthly Frequency Revision Factors For CRPL Basic Radio Propagation Prediction Reports.

Monthly:

CRPL—D. Basic Radio Propagation Predictions—Three months in advance. (Dept. of the Army, TB 11—499—, monthly supplements to TM 11—499; Dept. of the Air Force, TO 31—3—28 series).
On sale by Superintendent of Documents. Members of the Armed Forces should address cognizant military office.
CRPL—F. (Part A). Ionospheric Data.
(Part B). Solar-Geophysical Data.
Limited distribution. These publications are in general disseminated only to those individuals or scientific organizations which collaborate in the exchange of ionospheric, solar, geomagnetic, or other radio propagation data.

Catalog of Data:

A catalog of records and data on file at the U. S. IGY World Data Center A for Airglow and Ionosphere, Boulder Laboratories, National Bureau of Standards, which includes a fee schedule to cover the cost of supplying copies, is available upon request.

The publications listed above may be obtained without charge from the Central Radio Propagation Laboratory, National Bureau of Standards, Boulder Laboratories, Boulder, Colorado, unless otherwise indicated. Please note that the F series is not generally available.

Circulars of the National Bureau of Standards pertaining to Radio Sky Wave Transmission:

NBS Circular 462. Ionospheric Radio Propagation. \$1.25.
NBS Circular 465. Instructions for the Use of Basic Radio Propagation Predictions. 30 cents.
NBS Circular 557. Worldwide Radio Noise Levels Expected in the Frequency Band 10 Kilocycles to 100 megacycles. 30 cents.
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These Circulars are on sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Members of the Armed Forces should address the respective military office having cognizance of radio wave propagation.

Selected Technical Notes of the National Bureau of Standards:

NBS Tech. Note 2. PB151361. World Maps of F2 Critical Frequencies and Maximum Usable Frequency Factors. \$3.50. PB151361-2. \$3.50.
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